

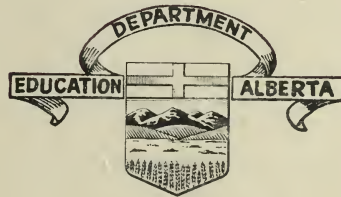
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CURRICULUM GUIDE

PROGRAM OF STUDIES

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SENIOR HIGH SCHOOLS OF ALBERTA



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PROGRAM OF STUDIES

FOR

SENIOR HIGH SCHOOLS

OF ALBERTA



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INTRODUCTION

This Program of Studies contains an outline content of each course in the senior high school together with a list of the authorized texts and approved secondary references. Regulations with respect to the credit value of courses, examinations and other matters relating to the operation of the high school appear in the current issue of the *Senior High School Handbook*.

Teachers who want suggestions concerning methods of handling a given course will find them in the related curriculum guide which may be obtained through the office of their superintendent or from the Curriculum Branch of the Department of Education.

The assistance of subcommittees in preparing the outlines in the various subjects is gratefully acknowledged. The evaluation and constructive criticism of the interim draft by school systems and by members of the Faculty of Education is appreciated.

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ACKNOWLEDGMENT

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SENIOR HIGH SCHOOL ART

General Comments

Five courses are offered in Senior High School Art. These new courses have been planned to help students develop a positive attitude towards art by providing structure and continuity in the program.

Arts 10, a basic general art course, is offered for all Alberta High School students. This program combines and replaces the previous art courses—Art 10 and Arts and Crafts 10. The student should develop some understanding and awareness of the art achievements of the past and present.

Art 20 is a study of drawing, painting, printmaking, sculpture, and environmental design, together with art history related to each area. Art 21 is a study of the creative crafts related to clay, textiles, metal, wood and synthetic materials. Arts 10 is a prerequisite for either Art 20 or Art 21. Art 20 and Art 21 may be taken concurrently.

Art 30 is a study in depth of drawing, painting, printmaking, and sculpture. Art 20 is a prerequisite for Art 30. Art 31 is a study in depth of selected areas from the Art 21 program, and Art 21 is the prerequisite of Art 31. Art 30 and Art 31 may be taken concurrently.

Ideally, all high school students should have experiences in art both as consumers and as producers. Through the use of slide and film presentations, lectures, discussions, demonstrations, and experiments with line, shape, tone, color, and texture in a variety of media, students should develop a greater sensitivity to aesthetic values in nature and in art. They should develop the ability to make independent and discriminating judgments as consumers of all sorts of man-designed objects in daily use. They should discover in art a means of understanding other cultures and of providing a source of deep personal satisfaction. The basic course, which involves training in the principles of the structure of art, is necessary for effective achievement in subsequent, more specialized courses.

These courses differ from the previous art courses in their emphasis on design and exposure to a broader range of media. They should be taught only by qualified art teachers, as the strength of the program depends on the ability, experience and enthusiasm of the teacher. The art classroom should contain a projector and screen for viewing slides; classroom reference books on art; working space, storage space, and exhibition areas for both two- and three-dimensional work. Instruction will be facilitated by installing a screen and projection facilities within the art room, so the instructor will be able to combine the use of visual aids with ongoing activities.

Objectives

To help the student :

- develop perceptual awareness and sensitivity; to see, feel and appreciate design in the world
- develop an awareness and understanding of the art of the past and the present
- develop his ability to apply his understanding of design principles to self-expression in art and everyday living

- develop in the various areas of the visual arts, such skills and techniques as may be necessary for the student's self-expression.

Student involvement will be continually influenced by the changing social patterns which may create a desire to investigate :

- contemporary and emerging art forms
- contemporary and emerging artistic vocabulary
- contemporary and emerging materials.

ARTS 10

Course Content

The Arts 10 course is divided into nine separate units. In the normal school year approximately four weeks would be given to each. Each unit is considered of equal importance. The general content of each unit is outlined below; the program within these broad general areas should be structured by the art teacher, making use of the grid in the teacher's guide. Except for the design unit and the one on individual projects which falls at the end of the course, the units may be studied in any desired order.

Art history is to be incorporated into all units. For purposes of this course, it is recommended that the five main periods surveyed include: ancient art, medieval art, renaissance art, nineteenth century art and modern art.

Work within each unit should further the objectives of the course. The importance of both aspects of the course, understanding and expressing, cannot be overemphasized. However, the time allotted to either area of involvement will depend on the approach of the teacher and how the various units and activities of the program interrelate. It may be advantageous, in the judgment of the teacher, to begin some units with appropriate activities and work through these to appreciation and understanding.

1. Design

- Language of design
- elements and principles

2. Architecture and Environment

- Buildings
- Landscape Architecture
- Town Planning

3. Drawing

- Contour
- Gesture
- Mass
- Finished Compositions

4. Painting

- Pattern
- Form
- Composition

5. Printmaking

- Surface Printing
- Relief Printing
- Stencil Printing

6. Sculpture (clay, wood, metal, etc.)

- Relief sculpture
- Three-dimensional forms

7. Crafts

- Ceramics
 - hand building
 - decorating
- Fabrics
 - fabric making
 - fabric decorating
- Metals
 - shaping and joining
 - decorating

8. Product Design

- Packaging, advertising, illustrating
- Manufacturing consumer goods

9. Individual Projects

- One or two additional research projects chosen by each student.

Basic List of Reference Books for Art Classroom**Design and Composition:**

- Looking and Seeing* (4 books plus guide), (Ginn and Co.), 1964
Design Through Discovery, Bevin, (Holt, Rinehart), 1963

History of Art:

- History of Art*, Janson, (Abrams), 1963
Art and Man, Brieger and Assoc., 3 vol., (Holt Rinehart, Canada), 1964

Drawing:

Creative Drawing: Point and Line, Rottger, (Reinhold), 1964

Painting:

Brush and Palette, Sorgman, (Reinhold), 1965

Printmaking:

Creative Printmaking, Andrews, (Prentice-Hall), 1964

Sculpture:

Sculpture — Basic Methods and Materials, Johnson, (McKay), 1960

Design Crafts:

Creative Clay Crafts, Rottger, (Reinhold), 1963

Crafts Design, Moseley and Assoc., (Wadsworth), 1962

Design in Commerce and Industry:

Art Today, Faulkner, 4th ed., (Holt, Rinehart), 1962.

NOTE: — Reference books for each senior high school art room, as listed above, would cost approximately \$75.00 per set. The same library would be adequate for other high school art courses.

— Newer books may be substituted for the above as better material becomes available in the different areas.

— Paperbacks and art periodicals should be added to this basic library.

ART 20

Introduction

The Art 20 course is divided into five units — drawing, painting, printmaking, sculpture, and environmental design. It is expected that the limited scope of this program will allow greater in-depth study to be made. Further depth could be accomplished by incorporating drawing, related history and environmental design as they apply to painting, printmaking and sculpture. All units should be preceded by a review of the appropriate basic units in Arts 10 in order to ensure smooth transition.

It is important that a student at this level be given increased opportunity to acquire greater proficiency in expressing himself both orally and in written assignments, and, therefore, he should be familiar with the terminology specific to each unit as it develops throughout the total high school art program.

Teacher and student must always be conscious of the balance between the study of works of art, individual creativity, experimentation, and skill in the use of tools and materials. The goal is neither perfection in techniques nor a memorization of historical and theoretical facts, but an involvement in a variety of art fields in sufficient depth to allow the student to assess his true interest and potential.

As an aid to greater aesthetic understanding and growth of skills, the student is encouraged to make comparative studies of the art forms of the past and present. Besides making use of the learning opportunities within the classroom, he should carry out independent research and experimentation in areas of specific interest to himself. He should assume more responsibility in planning and evaluating his own projects, and in discussing problems of mutual interest with other members of his class.

Through continued attention to the elements and principles of design, the student should become increasingly aware of both good and poor design in his community. He should be encouraged to use sketchbooks, written notes, and photography to record ideas from as many sources as possible.

COURSE CONTENT

A. Drawing

1. Analysis of drawings in relation to final use
2. Recognition of past drawing styles
3. Further development of drawing activity
4. Continued use of sketchbooks

B. Painting

1. Recognition of painting styles of individual artists
2. The use of painting to record reaction to environment
3. Increased skill and understanding in use of media and tools

C. Printmaking

1. Study of relationship of drawing and painting to printmaking
2. Comparative study of work of the past
3. Increased skill and understanding in printmaking techniques

D. Sculpture

1. Comparison and study of the form of natural and man-made objects
2. Study of the expressive qualities of sculpture throughout history
3. Applying the principles of design in creating sculptured forms

E. Environmental Design

1. Develop an awareness and appreciation of compatability between man-made and natural surroundings
2. Comparative review and study of architectural features as they relate to materials and locale
3. The place of painting, printmaking, and sculpture in our environment.

ART 21**Introduction**

The Art 21 course is divided into five units — design in crafts, clay, wood, metal, and fabric. Arts 10 presented a brief introduction to crafts design and activities, while Art 21 presents an opportunity for depth study in enrichment of functional objects through unique construction and applied decoration.

There is a need for better understanding and appreciation by the general public of the place of the handcrafted objects in our daily life and of the need for improved design in everyday articles. Through a study of man's attempts to relate design to function, appreciation for aesthetic forms can be developed. This study should include an evaluation of the approaches taken by artisans of the past and present.

The student choosing Art 21 should become personally involved in designing objects and working with materials that are used in the production of functional and decorative pieces. He should attempt problems in design which will involve clay, fabrics, metal, wood and synthetics. Decoration must be avoided unless it is an integral part of the whole unit. Each project should be planned carefully, executed with increasing competence in the use of tools and materials, and on completion, evaluated by teacher and student.

The program should be carefully planned to make the most efficient use of facilities and equipment. Reference books and audio-visual material must be readily available to provide for individual study.

COURSE CONTENT**A. Design as it Applies to Crafts**

1. A review of design principles as they apply specifically to the units of study
2. Continued use of drawing to interpret ideas for designs
3. Appreciation of the role of the artist/craftsman in the machine age

B. Clay

1. Survey of the use of clay in the past and a comparison of cultural styles
2. Consideration of the possibilities and limitations of clay
3. Experimentation and development of clay bodies, building techniques and glazes

C. Wood

1. Survey of outstanding wood crafts of various countries, emphasizing Canadian
2. Awareness of the suitability of wood to its ultimate form and use
3. Development of skill in designing, shaping, assembling, and finishing

D. Metal

1. A review of the traditional and contemporary uses of metal in crafts
2. Applying elements and principles of design to forming and finishing various metals

E. Fibers and Fabrics

1. Survey of fiber and fabric crafts throughout history
2. Development of pattern, texture, and color awareness in relation to fabric
3. Development of skill and discrimination in fabric creation and decoration.

ART 30

Art 30 is an extension of both Arts 10 and Art 20 courses. Art appreciation in the Arts 10 program may be viewed as being concerned with recognition of the art of the past and present, while in Art 20 the emphasis is on comparison of styles and techniques. Art 30 students should continue with both of these approaches, but in addition, should develop ability in assessing the work of others, in self-evaluation, and in personal interpretation.

In the three areas of the Art 30 course — painting, printmaking, and sculpture — the emphasis may be placed on any one unit, on appreciation or on activity. It must not be assumed that the two areas of drawing and environmental design, as in Art 20, are to be omitted; these should be incorporated as an integral part of each of the three activities. Principles and elements of design should form the natural core of every project undertaken.

To develop understanding and techniques in drawing, students should be encouraged to work with both visible and imagined forms. Through a study of the graphic symbolism of other artists, the student should develop his own interpretive style, keeping in mind the value of using minimum lines for maximum meaning. The student should have carefully recorded sketches and notations to be used in completing projects in every area.

The individual student, in consultation with the teachers, should plan a well-balanced program. One approach that might be considered is that of deep exploration on one theme, with appropriate interpretation of the idea to apply to different media within one area, or one idea to be used in two or three on-going activities. For example, a natural form could be the subject chosen for projects executed in various styles and techniques in painting, or it could be the theme for activities in painting, printmaking, and sculpture.

Art 30 students should be well aware of the growth of Canadian art in the 20th century. Art 30 students, in conjunction with Art 31 students should plan, organize, and set up individual and/or group exhibitions in the school and community.

COURSE CONTENT**A. Painting**

1. Comparative and critical study of paintings, with the major emphasis on 20th century artists
2. Study of symbolism —
 - a. appreciation — to develop the student's understanding of symbolism as employed by artists

- b. execution — to develop the student's ability to employ symbolism in his own work as a personal vocabulary
3. Use of design principles and symbolism in developing creative expression through painting.

B. Printmaking

1. A study of contemporary printmaking
2. Individual depth studies in selected areas, for example — block, plate
3. Introduction of a new method, such as lithography, collography
4. Experimental printing
 - a. combining various methods
 - b. using unusual materials
 - c. exploring surface distortions.

C. Sculpture

1. A study of contemporary trends in sculpture, noting:
 - a. simplicity of form
 - b. synthetic, traditional and mixed media
 - c. emerging forms, such as kinetic
2. Personal interpretations in three-dimensional forms
3. Individual depth studies in selected media, for example, one theme executed in various methods.

D. Students Should Present on Completion of Course:

1. Portfolio in two parts
 - a. work completed in class
 - b. work done independently
2. Sketchbooks with notations
3. Design project — illustrated development of some aspect of design
4. Independent written report about one work of art chosen by the student.

ART 31

The Art 31 program is a study in greater depth of the craft designs introduced in Arts 10 and continued in Art 21. Students will have learned to recognize the craft forms used throughout history in numerous geographic areas, and will have compared materials, techniques and styles. At the Art 31 level, the emphasis should be on the study of recent trends in the uses of both old and new materials. Attention should be given to North American crafts, particularly to the work of Canadian artisans.

Art 31 consists of design projects using such traditional materials as clay, metal, fibers and fabrics, as well as synthetics or any suitable combinations, including wood. The emphasis may be placed on any approach — on a particular unit, on appreciation, or on activity. Students should not lose sight of the value of drawing, in developing ideas for projects, or of the design relationship of crafts to environment. As in other art courses, a carefully compiled logbook recording drawings and notations of personal observations is a necessity.

The Art 31 student, in consultation with the teacher, should plan a program which encompasses the major craft forms of expression but which permits him to do some specialization in one particular craft activity. At times it may become necessary to carefully program the projects of Art 31 students in order to provide maximum use of facilities or equipment that may be limited in quantity, such as wheels, torches, looms. Students should be aware of the merit of out-of-class projects and these should be evaluated along with those done during class periods.

Art 31 students, in conjunction with Art 30 students, should plan, organize and set up individual and/or group exhibitions in the school and community.

COURSE CONTENT

There should be a broad involvement in the following areas, but at times it may be necessary to do some selecting based on facilities within the art room.

A. Clay

1. Study of contemporary pottery, noting the work of Canadian potters
2. Further experiences in clay-forming methods with individual specialization in one technique
3. Design and execute architectural accents in clay — such as panels, planters, dividers, murals
4. Experimental work in glazes and glazing

B. Metal

1. Study of the use of metals by contemporary artist/craftsmen
2. Depth study in jewellery — such as forming, casting, piercing, enamelling, etching, and/or combining with other materials
3. Artistic expressions of utilitarian objects — such as candlesticks, servers, tableware
4. Use of metal for architectural accents — such as weather vanes, door knockers, decorative lamps

C. Fiber and Fabrics

Fibers — yarns, reeds, grasses

1. Study of contemporary weaving
2. Experimentation with looms — inkle, waffle, harness (table or floor)
3. Knowledge of and experience with traditional threading and weaving techniques
4. Ability to create patterns
5. Experimentation — yardage, wall hangings, dividers

Fabric Decoration — cottons, burlap, net

1. Study of contemporary work in stitchery, dyeing, and printing
2. Batik — study of traditional methods and experimentation with contemporary approaches
3. Experimentation with natural materials for creating dyes
4. Exploration and experimentation to decorate cloth for yardage, wall hangings, banners.

D. Students Should Present on Completion of Course:

1. Portfolio in two parts:
 - a. work completed in class
 - b. work done independently

2. Sketch books with notations
3. Design project — illustrated development of some aspect of design of a craft project
4. Independent depth study and report of one aspect of a craft.

NOTE :

Other Materials — The above listing does not exclude the use of other materials that are now on the market or may appear in the future. Imaginative use of found and new materials, as they apply to the craft field is encouraged. In some situations teachers or students may find locally available materials that may be incorporated into the program.

BASIC LIST OF REFERENCE BOOKS FOR ART CLASSROOM

Design and Composition:

Bevlin, *Design Through Discovery*. Holt Rinehart, 1963.

Looking and Seeing. (4 books plus guide), Ginn and Co., 1964.

History of Art:

Brieger and Assoc., *Art and Man*. 3 Vol., Holt Rinehart, 1964.

Janson, *History of Art*. Abrams, 1963.

Drawing:

Rottger, *Creative Drawing: Point and Line*. Reinhold, 1964.

Painting:

Sorgman, *Brush and Palette*. Reinhold, 1965.

Printmaking:

Andrews, *Creative Printmaking*. Prentice Hall, 1964.

Sculpture:

Johnson, *Sculpture — Basic Methods and Materials*. McKay, 1960.

Design Crafts:

Moseley and Assoc., *Crafts Design*. Wadsworth, 1962.

Rottger, *Creative Clay Crafts*. Reinhold, 1963.

Design in Commerce and Industry:

Faulkner, *Art Today*, 4th ed. Holt, 1962.

Additional References for Senior Art Classes:

In addition to the basic reference books for art classrooms the following books should be added for senior courses:

Mendelowitz, *Drawing*. Holt. Rinehart, 1965.

*Ocvirk, Bone, Stinson and Wigg, *Art Fundamentals* (Theory and Practice), 2nd ed. William Brown Co., 1968.

Peterdi, *Printing Methods Old and New*. Macmillan, 1959.

*Schinneller, *Art: Search and Self-Discovery*, 2nd ed. International Text-book, 1968.

Slivka, Rose et al., *The Crafts of the Modern World*. Horizon Press, 1968.

Struppeck, *The Creation of Sculpture*. Holt, 1952.

*These books are recommended for primary pupil references.

NOTE :

- Reference books for each senior high school art room, as listed above, would cost approximately \$75.00 per set. The same library would be basic for other high school art courses.
- Newer books may be substituted for the above as better material becomes available in the different areas.
- Paperbacks and art periodicals should be added to this basic library.

BUSINESS EDUCATION

BOOKKEEPING 10

Text

Carlson et al, *20th Century Bookkeeping and Accounting*, Canadian Edition, Twenty-first Edition, B69.

Objectives

1. To provide a basic training in bookkeeping.
2. To provide the foundation for more advanced training in accountancy.
3. To introduce common business terms in realistic settings.
4. To promote good business habits, including neatness in records and reports, accuracy in arithmetic, legibility in handwriting, basing judgement on facts, and meeting obligations promptly.
5. To give the student an understanding of the preparation of financial statements.

Scope

1. Chapters 1 - 19 of the text.
2. Randall Practice Set, Parts 1 and 2.

Workbook

Working Papers and Study Guides for above text, Chapters 1 - 19, B691.

Practice Material

The Randall Practice Set, B613, W. J. Gage Ltd., Scarborough, Ontario.

BOOKKEEPING 20

Text

Carlson et al, *20th Century Bookkeeping and Accounting*, Canadian Edition, Twenty-first edition, B69, Chapters 20 - 32.

Objectives

1. To increase students' knowledge and technical competence by :
 - (a) Recording business transactions in the synoptic journal.
 - (b) Adapting bookkeeping methods to the business using columnar special journals.
2. To emphasize the function of bookkeeping records as an aid to management.
3. To stress the need for intelligent interpretation of bookkeeping records.

Scope

The basic requirements for this course are Chapters 20 - 32 inclusive, of the prescribed text. It is suggested that the annual statements of some large Canadian companies be examined.

Workbook

Working Papers and Study Guides to accompany the above text.

Practice Material

Burton Hardware, B623, W. J. Gage Ltd., Scarborough, Ontario.
Voss and Howard Wholesale Leather Goods, Set 625, W. J. Gage Limited, Scarborough, Ontario.

ACCOUNTING 30

Text

Carlson et al., *20th Century Bookkeeping and Accounting*, Advanced Course, Twenty-first Edition, W. J. Gage Ltd., Scarborough, Ontario.

Objectives

1. To demonstrate how bookkeeping records can serve management in controlling and planning business operations.
2. To encourage attitudes of inquiry and logical interpretation of financial statements.
3. To study adaptations of other accounting systems.

Scope

The course will consist of the material in the text.

Workbook

Workbook to accompany the text, B681.

Practice Material

At least sets 1 and 2 below:

- (1) Burns, Crane & Gilbert, B664.
- (2) Main Auto Supplies Co., B674.
- (3) Parks Manufacturing Company (optional), B678.

BUSINESS FUNDAMENTALS 10

Text

Bruce, Heywood and Abercombie, *Business Fundamentals*, Revised Edition, McGraw-Hill Co. Ltd., Toronto 4, Ontario.

Workbook (optional)

Workbook to accompany the text.

Objectives

1. To acquaint the student with fundamental business practices and thereby help him to be a more skilful consumer of the goods and services of business.
2. To provide an introductory course in business practices and thus assist the student in discovering aptitudes, abilities and interests which will help him in making educational and vocational plans.
3. To acquaint the student with the relations that exist between business and society and show the importance of the part which business plays in the daily life of everyone.
4. To show the interdependence of individuals, business and government.
5. To develop an appreciation of the need for service, courtesy, business etiquette, co-operation and other desirable citizenship traits.

Teachers' References

- Crabbe et al., *General Business*, Seventh Edition, G99, W. J. Gage, Ltd., Scarborough, Ontario.
- Reed et al., *Introduction to Business*, The Macmillan Co. of Canada, 70 Bond Street, Toronto, Ontario.
- Wilson-Eyster, *Consumer Economic Problems*, G16, Fifth Edition, W. J. Gage Ltd., Scarborough, Ontario.
- Wilhelms, Heimerl, *Consumer Economics — Principles and Problems*, McGraw-Hill Co. Ltd., Toronto 4, Ontario.

BUSINESS MACHINES 30**Texts**

Appropriate texts to be chosen from the following:

Agnew, *Office Machines Course*, Second Edition, M59, W. J. Gage Ltd., Scarborough, Ontario.

English et al., *Machine Calculation*, Pitman Publishing Co. Ltd., Toronto.

Fasnacht, *How to Use Business Machines*, Overview Course, McGraw-Hill Co. Ltd., Toronto, Ontario.

Walker et al., *How to use Adding and Calculating Machines*, McGraw-Hill Co. Ltd., Toronto, Ontario.

Objectives

1. To familiarize the students with the various types of office machines, their relative advantages, their basic uses, and operating procedures.
2. To specialize in the use of a few of the machines.
3. To give training in setting the decimal points correctly for the various processes, and in using common sense methods of checking results.
4. To develop facility in work with fractions and percentages.
5. To give training in cutting stencils and master copies.
6. To give training in operating the common types of duplicating machines.
7. To provide experience in the use of dictating and transcribing machines.
8. To insist on business standards for accuracy and neatness and to get the job done in a reasonable time.

Scope

Familiarizing with the following types of business machines:

1. Full keyboard listing adding machines
2. Ten-key adding listing machines
3. Key driven calculators
4. Printing calculators
5. Rotary or crank driven calculators
6. Bookkeeping and billing machines
7. Duplicators
8. Dictating and transcribing machines
9. Electric typewriters
10. Miscellaneous office appliances and machines.

It is suggested that at least 80 percent of time be devoted to the familiarization with and operation of the first six machines listed above.

BUSINESS ORGANIZATION AND MANAGEMENT 30

Text

Lynn and Acland, *Business Organization and Management*, 1966 Edition, McGraw Hill.

Objectives

1. To provide an opportunity for students to learn how business is organized and operated so that they have better concepts of their duties and functions as employees, or operators of their own business.
2. To learn how to evaluate and apply facts when making business decisions.
3. To make students aware that business is dynamic and that they must learn to be adaptable and to make their own rules and practices to meet new situations.

Scope

1. Meeting the Challenge of Change
 - (a) Technological
 - (b) Economic
 - (c) Social
 - (d) Political
2. Foundations of Canadian Economy
 - (a) Primary industries
 - (b) Secondary industries
 - (c) Service industries
 - (d) Construction industries
 - (e) Distributive industries
 - (f) Financial institutions
3. Forms and Organizational Structure of Business Organization in Canada
 - (a) Single proprietorship
 - (b) Partnership
 - (c) Corporation
 - (d) Cooperative
 - (e) Government operated
4. The Role of Government Regulations
 - (a) Control and regulations
 - i) municipal
 - ii) provincial
 - iii) federal
 - (b) Government aid to business
 - i) publications
 - ii) subsidies
 - iii) tax rebates, etc.
5. The Manufacturing Activity
 - i) Engineering
 - ii) Production
 - iii) Materials handling

6. The Purchasing and Marketing Activity
7. The Finance Activity
8. The Personnel Activity.

References

1. Hebert, *Introduction to Management*, 1966 Edition, Pitman.
2. Shilt and Wilsen, *Business Principles, and Management*, 1961 Edition, W. J. Gage.
3. Tonne & Simon, *Business Principles, Organization and Management*, 1963 Edition, McGraw Hill.
4. Robinson, *Business Finance for Canadians*, 1966 Edition, Pitman.

DATA PROCESSING 22

Text

Robichaud, *Understanding Modern Business Data Processing*, 1966 Edition
Gregg Division, McGraw Hill.

Objectives

1. To provide an introduction to unit record and electronic computer data processing.
2. To familiarize the students with the terms and routines of data processing and what the worker in an automated office needs to know.
3. To acquaint students with data processing procedures and concepts: manual, mechanical and electrical.
4. To develop a basic competence in the application of systems and in elementary programming of electro-mechanical and electronic data processing equipment.
5. To provide career guidance and background information for students who may wish to enter the field or proceed to advanced study.

NOTE: Students can be introduced to the machines available but it is not intended that Data Processing 22 be a machine operator's course.

Scope

I. INTRODUCTION

— Purchasing Routines

Departmental Requisition
Stockroom Requisition
Purchasing Order
Incoming Purchase Invoice

— Stock Department Routines

Filing Departmental Requisitions
Customers' Mail Orders
Perpetual Inventory
Physical Inventory
Receiving Shipments of Goods

- Sales Order Routines
 - Sales Invoice
 - Credit Invoice
 - Credit Approval
 - Shipping Department Invoice
 - Accounting Department Invoice
 - Customers' Ledger Cards
 - Preparation of Statements
- Payroll Routines
 - Time Cards
 - Overtime
 - Withholding Deductions
 - Cheques
- Business Reports
 - Inventory Transaction Listing
 - Stock Status Summary
 - Sales Analysis Summary
 - Financial Reports, (Profit and Loss, etc.).
- Business Routines
 - Demonstration of repetitive nature of business routines
 - Projects involving the use of same information many times
 - The "WHY" of Data Processing.

II. DEVELOPMENT OF OFFICE AUTOMATION

- The data processing cycle
- Automation in simple office tasks
- The keysort process and the pegboard
- The invention of the code
- The growing importance of automation in data processing
- The automated data processing cycle
- Two common automated systems
- Common-language machines
- What the worker in an automated office needs to know.

III. THE TABULATING SYSTEM

- Recording numeric information in cards
 - The tabulating system of processing data
 - The standard punched card
 - Recording numeric information in the card
 - Numeric codes
 - First steps in card planning
 - Introduction to the key-punch machine.
- Recording alphabetic information in cards
 - Zone punching area
 - Recording the letters of the alphabet
 - Planning cards for recording alphabetic information
 - Correcting errors made in card punching
 - Preparation of card layouts
 - Preparation of drum card for key-punch and verifier
 - Exercises on key-punch and verifier for all students.

- Processing data by the tabulating system
 - Steps in the tabulating system
 - The sorter and the sorting process
 - The collator
 - The interpreter
 - The reproducer
 - The accounting machine
 - The calculating process
 - The control panel
 - Programming the processing of data by the tabulating system.
- It is not intended to go into control panel functions in the above section. Functions of the machines should be discussed in general.

IV. ELECTRONIC COMPUTER SYSTEM OF DATA PROCESSING

- Introduction
 - Recent computer improvements
 - Digital and analog computers
 - Steps in the electronic computer system
 - Batch processing; random processing
 - Units that comprise the electronic computer system
 - Magnetic tape code
 - Binary code
 - Binary code for digits
 - Binary code for letters
 - Parity check
 - Business forms combined with magnetic tape
 - Magnetic ink forms as input media
 - Electronic data processing in banks
 - Converters
- Processing Data by the Electronic Computer System
 - Computer memory
 - What the computer can do
 - Computer words and addresses
 - Instruction format
- Planning an electronic computer program
 - Defining the problem
 - Preparing the program steps to solve the problem
 - Preparing a block diagram of the steps in the program
 - Coding and assembling the program
 - Testing the program
 - A sample program using symbolic coding
 - The computer applied to inventory control
 - Summary

References

- Wanous and Wanous and Sherk, *Automation Office Practice*, 1966 Edition, South - Western Publishing Co. Working papers to accompany above.
- Awrđ, Elias M., *Business Data Processing*, Prentice Hall.
- I.B.M. Manuals and Programmed Instruction Courses.*
- Darnowski, V. S. *You and the Computer*, General Electric Computers — Theory and Uses.
- Abrams and Corvine, *Basic Data Processing*, 1966 Edition, Holt, Rinehart and Winston, Inc.

LAW 20**Text**

Jennings, *Canadian Law*, 1960 Edition, The Ryerson Press, Toronto.

Objectives

1. To give the student a knowledge of the fundamental principles of law that govern the conduct of business activities.
2. To cultivate traits of good citizenship, especially those of respect for the rights of others, honesty and justice.
3. To develop a respect for, and obedience to, the law.
4. To develop an understanding of the functions and purposes of law in our democratic society, including the development of our legal system and the courts that administer justice.
5. To assist the student in knowing his rights and when to seek legal advice.
6. To emphasize the need and use of precise English.
7. To develop in the individual student the ability to see both sides of a problem.
8. To familiarize the student with commonly used legal papers and documents and with the use of those which do not ordinarily require the services of a lawyer.

Scope

1. 3 Credits — **Minimum requirements, Units 1-9 and Units 12 and 13 of the recommended text.**
- 5 Credits — **Coverage of all of the material in the recommended text, and in addition, a study of selected Alberta statutes. It is expected that teachers will choose those statutes that have particular significance to students in the attendance area of the school, e.g., The Labour Act for an industrialized area, and The Highway Traffic Act for any area in the Province.**
2. Contracts.
3. The ownership of land, title to land and registration of title, leases, landlord and tenant, notice to vacate; mortgages and foreclosure; protection of an interest in land, caveat; taxes on real property; special rights, mineral, water, etc.; documents and liens.
4. Negotiable instruments: note, cheque, draft, bill of exchange; banking, interest; insurance; principal and agent, sales, bailment, pledge and lien, guarantee and suretyship.
5. Common business forms: power of attorney, simple contract, lien note, instalment note, etc.
6. Partnership and companies: different types of company; bankruptcy.
7. Succession: Wills.
8. Master and Servant: Workmen's Compensation.
9. Libel and slander.
10. Liability for accidents — traffic accidents; negligence; accident insurance.

11. The course of law and court procedures; police courts; civil and criminal law; the Criminal Code; crimes and misdemeanors.
12. The civil liberties of the subject; Habeas Corpus; freedom of speech and assembly; freedom of the press.

Workbook

Jennings, *Workbook in Canadian Law*, The Ryerson Press, Toronto.

Teachers' References

Walker, *Teachers' Manual on Business Law*, The Ryerson Press, Toronto.

Anger, *Summary of Canadian Commercial Law*, Sir Isaac Pitman & Sons Ltd., Toronto.

Fickett, Cordell, *Colorful Teaching in Business Law*, J. Weston Walch, Box 1075, Portland, Maine.

Falconbridge and Smith, *Manual of Canadian Business Law*, Western Edition, Sir Isaac Pitman & Sons Ltd., Toronto.

Schneider et al., *Personal Business Law*, McGraw-Hill Co., Toronto 4.

MERCHANDISING 20

Texts

Wingate and Weiner, *Retail Merchandising*, Sixth Edition, W. J. Gage.
G. E. Seguin, *Basic Retailing*, Pitman.

Objectives

1. To present occupational opportunities in the distributive fields in the business community.
2. To develop in the student the ability required for initial performance on the job.
3. To provide a basis for further study and experience.
4. To develop an appreciation on the part distribution plays in our free enterprise society.

Scope

1. The teacher should undertake to cover as many of the areas listed in either text as is consistent with student interest, ability and experience.
2. It is suggested that each student be required to present at least one piece of research during the year.

Workbooks

Workbooks which accompany the texts are available.

Teachers' References

- Richert et al, *Retailing Principles and Practices*, 4th Edition, Gregg Publishing Company.
Workbook to accompany this.
Instructors Manual available.
- Reich et al, *Basic Retailing*, Sir Isaac Pitman and Sons. Workbook For *Basic Retailing*.
- Shaffer, *How To Be A Successful Retailer In Canada*, McGraw-Hill.
- Richert and Stoner, *Retailing Problems and Projects*, Gregg Publishing Company.
A text-workbook.
- Wingate and Nolan, *Fundamentals of Selling*, 7th Edition, W. J. Gage and Company.
- Rowse and Nolan, *Fundamentals of Advertising*, 6th Edition, W. J. Gage and Company.

The National Cash Register Company has available a large and extremely fine collection of pamphlets and aids.

E.g.1. *How To Keep Customers Buying.*

2. *Today's Revolution In Retail Merchandising.*

3. *Cash Registers — Their Place In Modern Retail Security.*

4. *Toward Successful Service Station Management.*

5. *Credits and Collecting.*

6. *Expenses In Retail Business.*

7. *Making Your Windows Work For You.*

8. *Controlling Merchandise.*

9. *Pointing The Way Toward Merchandising Today.*

Gregory, *Salesmanship*, Sir Isaac Pitman and Sons.

Ernest and Davall, *Salesmanship Fundamentals*, Gregg Company.

Also excellent periodicals:

Financial Post,

Canadian Retailer; Maclean Publishing Company.

OFFICE PROCEDURES

(Clerical Practice 20, Office Practice 30)

Objectives

1. To provide instruction in basic skills required for initial office positions.
2. To develop desirable personal traits and work habits acceptable to office standards. The ability to work co-operatively with others must be emphasized. The above will require a year-long reinforcement.
3. To integrate new and previously learned skills by means of realistic office assignments.

Possible Alignments of Courses

The selection a school makes should be based on:

1. Equipment available in the school.
2. Student's need.
3. Demands of business in the community.
4. Available space in the timetable.
5. The offering of other courses.
6. A one-year special program.

CLERICAL PRACTICE 20

Texts

Reid, *Modern Office Procedures, Book I*, Sir Isaac Pitman (Canada)

and one of:

1. Bassett, Agnew and Goodman, *Filing Office Practice*, K 971 C., Can. ed., W. J. Gage.
2. Smith, M. D., *Canadian Filing Practice*, Pitman.

Teachers' References

- Farmer, G. M., *Word Division in Canadian Business Vocabulary*, W. J. Gage.
- Archer et al., *General Office Practice*, McGraw-Hill Co., Toronto 4.
- Kahn-Yenan, *Progressive Filing*, McGraw-Hill Co., Toronto 4.
- Agnew et al., *Clerical Office Practice*, McGraw-Hill Co., Toronto 4.
- Alsop & McBride, *She's Off To Work — A Guide To Successful Living*, Vanguard Press, New York.
- Gregg, *Applied Secretarial Practice*, Second Edition, Gregg, McGraw-Hill Co., Toronto.
- Harris, *Business Offices*, Gregg, McGraw-Hill Co., Toronto 4.
- MacGibbon, *Fitting Yourself For Business*, McGraw-Hill Co., Toronto 4, (Valuable for Units 1 and 3).
- Moreland, *Typewriting and Office Practice*, Sir Isaac Pitman & Sons Ltd., Toronto.
- Strony-Greenway, *The Secretary at Work*, McGraw-Hill Co., Toronto 4.
- Frasnacht, *How To Use Business Machines*, McGraw-Hill Co., Toronto 4.
- Sparling, *A Complete Course in Office Practice*, Second Edition, McGraw-Hill Co., Toronto 4.

OFFICE PRACTICE 30**Texts**

- Reid, *Modern Office Procedures*, Book 2, Sir Isaac Pitman (Canada).
- Agnew et al., *Secretarial Office Practice*, Sixth Edition, W. J. Gage.
- Gregg et al., *Applied Secretarial Practice*, Fifth Edition, McGraw-Hill.
- and one of :

1. Bassett, Agnew and Goodman, *Filing Office Practice*, K 971 C, Can. ed., W. J. Gage.
2. Smith, M. D., *Canadian Filing Practice*, Pitman.

Teachers' References

- Hager et al., *Business English Essentials*, McGraw-Hill Co., Toronto.
- Robertson, Carmichael, *Business Letter English*, McGraw-Hill Co., Toronto.
- Mayo, *Communications Handbook For Secretaries*, McGraw-Hill Co., Toronto.
- Aurner, *Effective Business English*, E15, W. J. Gage Ltd., Scarborough, Ontario.
- Larison, *How To Get and Hold The Job You Want*, Longmans, Green & Co., Toronto.
- Warner, *Canadian Commercial Correspondence*, Sir Isaac Pitman & Sons, Ltd., Toronto.
- Bassett-Agnew, *Business Filing*, E98, W. J. Gage Ltd., Scarborough, Ontario.
- Farmer, G. M., *Word Division in Canadian Business Vocabulary*, W. J. Gage.

SCOPE OF VARIOUS COMBINATIONS OF COURSES**A. Two-Course Program Without Business Machines (Clerical Practice 20 — Office Practice 30)**

The suggested minimum units are as follows:

(See units which follow on page 16)

Clerical Practice 20 — 1, 2, 4, 5, 6, 7, 13, 14, 21, 24.

Office Practice 30 — 3, 10, 11, 12, 15, 16, 17, 18, 19, 20, 22, 23, 24.

Other units could be chosen as enrichment for more capable students at the teacher's discretion.

B. Two-Course Program With Business Machines (Clerical Practice 20 — Office Practice 30)

The suggested minimum units are as follows:

(See units which follow below)

Clerical Practice 20 — 1, 2, 4, 5, 6, 7, 8, 9, 13, 14, 21, 24.

Office Practice 30 — 3, 8, 9, 10, 11, 12, 15, 16, 17, 18, 19, 23.

C. One-Course Program

1. **Clerical Practice 20** — The needs of the non-typing or weak typist can be met by Clerical Practice 20 as a terminal course. Student assignments will be created by hand. Thus, working papers and workbook must be selected with this in mind. Penmanship should receive adequate attention. Suggested minimum units are as follows:

(See units which follow below)

1, 2, 3, 4, 5, 6, 12, 13, 14, 16, 17, 18, 19, 23.

or

2. **Office Practice 30** — This course is suggested for the smaller high school and those schools offering a one-year special program. The selection of topics will be based on the needs of the students and consideration of materials covered in the typewriting program.

Suggested minimum units are as follows:

2, 3, 4, 6, 7, 10, 11, 12, 13, 15, 17, 18, 19, 23.

(See units which follow below)

UNITS OF INSTRUCTION

1. **Personality Traits and Work Habits**

Awaken in the student a realization of his responsibility to the employer through this unit.

2. **Filing — Alphabetic System**

Stress should be laid on accuracy in training of clerical filing.

3. **Filing — Other Systems**

Numeric, Direct Name, Subject, Geographic, Soundex, etc.

4. **Telephone and Related Equipment**

Where equipment is available much practice should be given.

5. **The Receptionist**

Develop skills here, particularly in the classes with clerical students.

6. **Mailing**

The mail clerk is an initial position for beginning clerical workers in many companies.

7. **Office Machines — General**

- a) Spirit Duplicator
- b) Stencil Duplicator
- c) Off-set Duplicator
- d) Copiers — various makes.

The instruction should be aimed at teaching the students how to prepare accurate, neat and well-planned stencils and master copies. Considerable practice should be experienced by all typists at least by their final year.

- e) Miscellaneous equipment and supplies.

8. Office Machines — Calculating

- a) Full Keyboard Adding-Listing
- b) Ten-Key Adding-Listing
- c) Key Driven Calculator
- d) Rotary
- e) Others.

This unit should be concerned with accurate and rapid addition and subtraction. Simple multiplication on "C" and "D". Practical applications should be introduced whenever possible. Keep in mind clerical arithmetic. Students registered in Bookkeeping 10 and 20 should be encouraged to utilize the business machines for additional practical work.

9. Office Machines — Calculating

- a) Rotary
- b) Key Driven
- c) Printing Calculator
- d) Others.

The four fundamentals at rapid and accurate speeds. Percentage and decimal applications to a reasonable level of proficiency. Practical problems should be used throughout.

10. Office Machines — Recording and Transcribing Units

Some form of rotation plan should be designed in conjunction with 8 and/or 9 above.

11. The Business Letter

The teacher should consult with the teachers of typewriting and English before embarking on this unit to minimize overlapping of instruction.

- a) Mechanics of typing a letter.
- b) Details of a business letter.
- c) Composing letters.
- d) Types of business letters. Capitalize on student interest and ability here.

12. Using Correct English

A co-operative arrangement with the teachers of English should be established for this area.

- a) Business speech — voice, pronunciation, etc.
- b) Grammar
- c) Spelling and word choice
- d) Punctuation
- e) Capitalization, abbreviations and numbers.

13. Banking

The forms and procedures should be studied in some detail. A complete set of forms should be available to each student.

14. Clerical Merchandising

If Merchandising is taught in the school, some cooperative arrangement should be worked out in this area.

- a) Activities of buying
- b) Receiving and stockkeeping
- c) Selling
 - wholesale
 - retail

d) Shipping

e) Credit and collection.

Along with the theory and processes, the students should be able to understand and handle the forms in all the above areas. The selection of a good workbook would aid greatly.

15. Telegraph, Cable and Radio Services

Practical applications here.

16. Interviewing Callers

This is in more detail than #5 above.

17. Financial Duties

This unit is aimed toward the secretarial student who may enter business in the small office. The handling, recording and reconciling of cash is the important feature. It could be considered as an enrichment to #13. Students who have not studied bookkeeping should select this, whereas, those who have had the bookkeeping course could omit the section.

18. Sources of Information

a) English usage and style

b) General information

c) Typical uses of reference books

d) Institutional and current sources.

19. Transportation of Goods

a) Services

b) Preparation

c) Receiving

d) Insurance regulations

20. Transportation of Persons

a) Methods

b) Accommodations and services

c) Hotel information

d) Itineraries

e) Funds

21. Production Work

This should be under control of the teacher of office practice. It perhaps could be considered as bonus or enrichment work with credit given.

a) School newspaper

b) School year book

c) Work for staff

d) Work for Home and School Association

e) Sundry

22. Legal Documents

The preparation rather than the theory.

23. Seeking Employment

a) Self-analysis

b) Sources of job opportunities

c) Letter of application

d) Filling out application forms

e) Interview

f) Follow-up

24. Electronic Data Processing

Aspects of data processing should be introduced where and whenever possible. The teacher of office procedures should begin to establish a file of materials relative to this area and continue to update it.

RECORD KEEPING 10

Text

Moore et al., *Record Keeping For Everyone*, Canadian Edition, 1957, AO41, W. J. Gage Ltd., Scarborough, Ontario.

Workbook

Workbook to accompany text.

Objectives

1. To develop an understanding of, and an appreciation for good record keeping in personal finance, in social organizations and in single-proprietorship business of trading and non-trading concerns.
2. To develop a familiarity with common business terms and their uses.
3. To inculcate habits of neatness, accuracy and legibility.
4. To provide an exploratory course in bookkeeping that will build interests and discover the aptitudes of the students in this subject.
5. To develop an understanding of the bookkeeping cycle.

Scope

1. Chapters 8, 9 and 10 are required of all students.
2. Minimum requirements:
 - i. 2-Credit Course — four additional chapters.
 - ii. 3-Credit Course — five additional chapters.
 - iii. 4-Credit Course — six additional chapters.

SHORTHAND

Minimum requirements:

| | Minimum Words Per Minute | Minimum Transcribing Rate |
|---|--------------------------------|---------------------------------|
| Shorthand 10 (Practiced Material) | 50 | — |
| Shorthand 20 (Unpracticed Material) | 70 | 15 |
| Shorthand 30 (Unpracticed Material) | 90 | 25 |

SHORTHAND 10

Objectives

1. To develop the ability to take dictation at a minimum of 50 words per minute on practiced material.
2. To apply the principles of shorthand to a writing vocabulary of high frequency words and their derivatives as outlined in the prescribed textbook.
3. To develop skill and fluency in writing neat and accurate outlines of good style from simple practiced material.
4. To develop skill in reading intelligently and rapidly from engraved shorthand plates and from pupil's own notes.
5. To give some practice in transcribing simple sentences and paragraphs so that the basic skills of shorthand and typewriting may be correlated.

SHORTHAND 10 (PITMAN)**Texts**

- New Basic Course In Pitman Shorthand*, Sir Isaac Pitman & Sons Ltd., Toronto.
Student's Shorthand Dictionary and Phrase Book, Sir Isaac Pitman & Sons Ltd., Toronto.
Progressive Skill Development, Sir Isaac Pitman & Sons Ltd., Toronto.
 May be used to advantage in all classes.

Scope

Assuming that there are approximately 35 weeks in the school year, a plan for the year should provide for complete coverage of the introduction and the 60 lessons in approximately 30 weeks, and thus leave 5 weeks for the review. Some practical material should be dictated from the beginning.

Optional Material (Pitman)

- Pitman Shorthand Workbook*, Sir Isaac Pitman & Sons Ltd., Toronto.
Pitman Monographs and Tests, Sir Isaac Pitman & Sons Ltd., Toronto.
Walsh, Reading and Dictation Studies, Sir Isaac Pitman & Sons Ltd., Toronto.
Short Stories, Volumes 1 and 2, Sir Isaac Pitman & Sons Ltd., Toronto.

SHORTHAND 10 (GREGG)**Texts**

- Gregg Shorthand, Diamond Jubilee Series* (Canadian Edition), Gregg, Leslie & Zoubek.

or

- Gregg Shorthand, Functional Method*, Diamond Jubilee Series, Leslie & Zoubek.

Scope

Coverage of prescribed texts.

Optional Material (Gregg)

- Workbook to accompany Gregg Shorthand, Diamond Jubilee Series* (including Functional Method).
Workbook For Gregg Shorthand Manual (including Functional Method), Second Edition, McGraw-Hill Co., Toronto.
Most-Used Shorthand Words and Phrases (Simplified Edition), McGraw-Hill Co., Toronto.
Graded Transcribing Tests In Gregg Shorthand Simplified, Second Edition, McGraw-Hill Co., Toronto.
Gregg Shorthand Dictionary, Diamond Jubilee Series, McGraw-Hill Co., Toronto.

SHORTHAND 20**Note:**

Students should be required to take Typewriting 20 with Shorthand 20. Unless the student has the skill required for Typewriting 20 the problem of transcription will be exceedingly difficult. **It is desirable to schedule the type-writing period immediately following the shorthand period to promote effective development of the transcription skills.**

The student should expand his shorthand vocabulary by means of supplementary reading and through the use of the Shorthand dictionary.

Objectives

1. The Shorthand 20 course should enable the student to develop his reading and writing of shorthand as well as his transcribing skills. Hence, the greater part of each teaching period should be devoted to the development of these skills.
2. Dictation at a minimum of 70 wpm on unpracticed material and transcribed at 15 wpm.
3. Shorthand 20 may be enriched for a superior or a more mature group to reach a degree of vocational competence.

SHORTHAND 20 (PITMAN)

Texts

Pitman Shorthand Dictation and Transcription, Sir Isaac Pitman & Sons Ltd., Toronto.
 Simon Duchan, *Basic Dictation*, Sir Isaac Pitman & Sons Ltd., Toronto.

Scope

Coverage of either prescribed text plus as much additional reading material as possible.

Optional Material (Pitman)

Steps To Success In Shorthand, Book 1, Sir Isaac Pitman & Sons Ltd., Toronto.
Shorthand Speed Drills, Sir Isaac Pitman & Sons Ltd., Toronto.
Graded Office Style Dictation, Sir Isaac Pitman & Sons Ltd., Toronto.
The Pitman Journal, Sir Isaac Pitman & Sons Ltd., Toronto.
Tapes and Dictation Discs, Sir Isaac Pitman & Sons Ltd., Toronto.
 Alston, *Successful Devices In Teaching Shorthand*, J. Weston Walch, Box 1075, Portland, Maine.

SHORTHAND 20 (GREGG)

Texts

Leslie et al., *Gregg Dictation, Diamond Jubilee Series* (Canadian Edition).
Gregg Dictation Simplified, Second Term, Second Edition, McGraw-Hill Co., Toronto.

Scope

Coverage of prescribed texts plus as much additional reading material as possible.

Optional Material (Gregg)

Leslie et al., *Transcription Workbook to accompany Gregg Dictation*, Diamond Jubilee Series.
 Zoubek, *Progressive Dictation With Previews*, McGraw-Hill Co., Toronto.
Gregg Shorthand Dictionary, Diamond Jubilee Series, McGraw-Hill Co., Toronto.
Tapes and Dictation Discs, McGraw-Hill Co., Toronto.
 Walch, *Successful Devices In Teaching Shorthand*, Box 1075, Portland, Maine.
Student's Transcript of Gregg Dictation Simplified, Second Edition, McGraw-Hill Co., Toronto.
Transcription Workbook For Gregg Dictation Simplified, Second Edition, McGraw-Hill Co., Toronto.

SHORTHAND 30

Texts

Either Pitman or Gregg Shorthand:

Forkner, Osborne and O'Brien, *Correlated Dictation and Transcription*, Sir Isaac Pitman & Sons Ltd., Toronto.

Pitman Shorthand:

Aitchison, *Pitman Advanced Dictation Course*, Sir Isaac Pitman & Sons Ltd., Toronto.

Gregg Shorthand:

Leslie & Zoubek, *Gregg Transcription*, Diamond Jubilee Series.

Leslie & Zoubek, *Gregg Speed Building*, Diamond Jubilee Series.

Objectives

1. To meet standards of business entrance. (Check with local standards.)
2. Dictation at a minimum of 90 wpm on unpracticed material and transcribed at 25 wpm, mailable copy with carbon copy and envelopes.

Scope

Sufficient material to meet the above objectives.

Optional Material

Steps To Success In Shorthand, Book 2, Sir Isaac Pitman & Sons Ltd., Toronto. Records and tapes as listed in current catalogues.

Access to a Secretarial Handbook.

Leslie & Zoubek, *Workbook to accompany Gregg Transcription*, Diamond Jubilee Series.

Gregg, Leslie & Zoubek, *Workbook to accompany Gregg Speed Building*, Diamond Jubilee Series.

TYPEWRITING 10

Texts

Rowe et al., *Gregg Typing, Complete Course, Second Edition*, McGraw-Hill Co., Toronto 4.

Lessenberry et al., *20th Century Typewriting Course*, Seventh Edition, T50, W. J. Gage Ltd., Scarborough, Ontario.

(a) Scope

Lessons 1-75 in Gregg Typing, Complete Course.

Or

Lessons 1-75 in 20th Century Typewriting Course.

Or

Lessons 1-84 in Gregg Typing 191 Series.

The suggested scope for Typewriting 10 (30 credits) is fifty selected lessons in either text.

(b) Suggested Evaluation of Typewriting 10

Speed and accuracy ----- 50%

Problem and Production work ----- 50%

Optional Materials

Workbooks and teacher's manuals to accompany the texts.

TYPEWRITING 20**Texts**

Rowe et al., *Gregg Typing, Complete Course*, Second Edition, McGraw-Hill Co., Toronto 4.

Lessenberry et al., *20th Century Typewriting Course*, Seventh Edition, T50, W. J. Gage Ltd., Scarborough, Ontario.

Rowe et al., *Gregg Typing 191 Series, Book 1 — General Typing* (Canadian Edition).

Rowe et al., *Gregg Typing 191 Series, Book 2 — Office Production Typing* (Canadian Edition).

Scope

Lessons 76-175 in *Gregg Typing, Complete Course*.

Or

Lessons 76-175 in *20th Century Typewriting Course*.

Or

Lessons 85-144 in *Gregg Typing 191 Series, Book 1*.

And

Lessons 1-36 in *Gregg Typing 191 Series, Book 2*.

Suggested Evaluation of Typewriting 20

Speed and Accuracy ----- 40%

Problem and Production Work ----- 60%

Optional Material

Workbooks and teacher's manuals to accompany the texts.

TYPEWRITING 30**Texts**

Rowe et al., *Gregg Typing, Complete Course*, Second Edition, McGraw-Hill Co., Toronto 4.

Lessenberry et al., *20th Century Typewriting Course*, Seventh Edition, T50, W. J. Gage Ltd., Scarborough, Ontario.

Rowe et al., *Gregg Typing 191 Series, Book 2 — Office Production Typing* (Canadian Edition).

Scope

Lessons 176-300 in *Gregg Typing, Complete Course* plus supplementary materials.

Or

Lessons 176-300 in *20th Century Typewriting Course* plus supplementary materials.

Or

Lessons 37-144 in *Gregg Typing 191 Series, Book 2* plus supplementary materials.

Suggested Evaluation of Typewriting 30

Speed and Accuracy ----- 20%

Problem and Production Work ----- 80%

Optional Material

Workbooks and teacher's manuals to accompany the texts.

DRAMATICS

The Nature of the Dramatics Courses

The series of Dramatics Courses in the Alberta Schools is concerned with the techniques and processes necessary to bring a play to the stage. This involves a wide range of techniques and skills. These are courses *not* in dramatic literature, but in the activities involved in production: acting, makeup, costuming, stage-craft and lighting. The teaching of dramatics involves considerable technical knowledge and skills on the part of the teacher, and some equipment.

Specific Objectives

1. To develop an appreciation of the theatre through an understanding of the techniques and mechanics of play-productions: directing, acting, scene design, construction, stage lighting, costume design and execution, and makeup.
2. To broaden cultural interests through the study of plays and the study of the history and development of the theatre.
3. To encourage and develop activities and interests that will provide means for using leisure time pleasantly and profitably.
4. To give practical experience in rehearsal and production so as to develop qualities of co-operation, responsibility, initiative and a loyalty to a common cause.
5. To prepare a sound foundation for those pupils who plan to major in university drama, enter a professional school of the theatre, or to participate in community dramatics organizations.
6. To discover and develop talent in the arts of the theatre that may be a basis for future vocation or professional life.
7. To stimulate an interest in dramatics and the allied art forms of painting, architecture, music, dance, motion picture, radio and television.
8. To build imagination and broaden sympathies through the visualizing and analyzing of character and through the projection of the student's interpretation by means of voice and pantomime.
9. To develop an adequate and pleasant speaking voice and good diction according to regional standards.
10. To develop physical poise, improvement of posture, freedom and grace of movement.

N.B. — These are not textbook courses. They are courses in the theory and practice of stage techniques, as well as in the acquiring of a critical interest in and understanding of dramatics. In the following course outlines are indicated the techniques and areas of study considered basic within the limits of each course.

DRAMATICS 10

Introduction

The Dramatics 10 Course must serve two functions: it should provide a function for the two senior courses in dramatics, but it must also be a terminal course in itself since many students will not continue with the advanced courses. Many schools that offer Dramatics 10 will not be offering Dramatics 20 and 30. It would be advisable in such schools to include a brief history of the theatre in the Dramatics 10 course. Probably four to six lessons would be sufficient. (*The Stage and School* by Ommanney provides necessary material if other references are not available.)

Text

Barnes and Sutcliffe, *On Stage, Everyone*.

Course Content

1. Acting.
 - (a) Characterization — Mental
 - (b) Characterization — Physical
2. Design.
3. Costuming.
4. Stagecraft.
5. Lighting.
6. Interest and Application.
7. Evaluation.

DRAMATICS 20

Dramatics 20 is a course for those students who have shown particular interest in or aptitude for dramatics. This course should make greater demands upon the student than did Dramatics 10. It is hoped that the students in this class (possibly in conjunction with the students of Dramatics 30) will participate in the production of a full-length play for public performance. Each student should have experience in production since production is the goal of dramatics study. Participation, however, need not be in an acting capacity. Wherever possible production and stagecraft tasks should be performed by the students.

Text

Barnes and Sutcliffe, *On Stage, Everyone*, Brett-MacMillan Publishing Company.

Course Content

1. Acting.
 - (a) Characterization
 - (b) Techniques
2. Production and Stagecraft.
 - (a) The three-act play in relation to form, type and structure (plot, climax, theme, characterization).

- (b) The demands of the three-act play on the various personnel involved.
 - (c) The choosing of a three-act play for school production.
 - (d) The analysis of the script for production and the making of the prompt script.
 - (e) Stagecraft (Refer to *Play Production*, Nelms).
3. History.
- (a) Greek and Roman
 - (b) Medieval
 - (c) English Renaissance
 - (d) Restoration
 - (e) The Nineteenth Century

DRAMATICS 30

Text

Nelms: *Play Production*.

Dramatics 30 is concerned primarily with giving individual help in any chosen field of theatre activity. Each student should be taken as far as possible within the limitations of time and his talents. The work of the course should be culminated in the public performance of a full length play (probably in conjunction with the Dramatics 20 students).

Course Content

- 1. Acting.
- 2. Design.
- 3. Production.
- 4. History —
 - (a) Ibsen — Realism and Fantasy
 - (b) Shavian Realism
 - (c) The Irish Movement
 - (d) The English Poetic Movement
 - (e) American Naturalism
 - (f) American Impressionism
 - (g) American Symbolism and Expression.

ENGLISH

SENIOR HIGH SCHOOL ENGLISH

Objectives

It seems reasonable to expect from the study of language and literature dividends basic to almost every phase of human activity. It has been said, for example, that English contributes to individual growth and development in such disparate matters as aesthetic and spiritual values, intellectual curiosity and critical thinking, vocational competence, general enjoyment and the effective use of leisure time, that it contributes to social growth in terms of human relations and democratic citizenship.

Clearly, the English program can and should serve these broad purposes. Just as clearly, their fulfilment implies the achievement of most limited purposes relative to the communication skills: *the clear and acceptable expression of ideas in speech and writing, and the efficient recognition, interpretation, and exploration of ideas in reading and listening.*

The two categories of purpose suggested above may be termed the general and the specific aims, respectively, of the English program. They are not to be regarded as competitive, either in time or importance. The communication skills as such can be learned only within the context of broader purposes which, in turn, can be achieved only through competence in the skills themselves.

The Language Program

Although the detailed nature of language learning remains obscure, one fact is clear and another may fairly be assumed. It is clear that language is a social process: hence the importance of good models, especially contemporary. It may be assumed that language improves with study and practice: hence the importance of guided experience in speaking and writing.

The prescribed handbooks are designed to foster the analytical aspect of language study. Grammatically speaking, their approach is rather conservative. There is little doubt, of course, that a more purposeful system of grammar is being developed by the structural linguists, and that this should be introduced as appropriate text materials become available.

More systematic attention than heretofore is given to the skills of reading and of spelling. Teachers are expected to adjust these emphases to the specific needs of individual pupils or groups.

The Literature Program

In pursuit of the broader outcomes of literature the teacher should seek to extend the student's acquaintance with writings of high quality, and to heighten his standards of appreciation. The first of these tasks implies selection from various times and places — including twentieth-century Canada. The second implies that the literary standards of most high school students may not immediately (or ever) approximate those of the literary critic. The teacher should, of course, recognize that "the literary experience" in our time comes not only from books but from periodicals, discs, tapes, radio and television.

Attention to the improvement of reading and listening skills as such should constitute a developmental or remedial emphasis in every English program.

Individual Differences

For a variety of reasons, students differ in linguistic capacity. This means that the teacher must consider the strengths and the limitations of each pupil as he works towards the highest achievement in communication for all.

In the hands of the resourceful teacher the approved text or texts should be a major instrument in reaching the goals of the course. It is recognized, however, that the variety of materials now approved is insufficient to meet the needs of all students; and the Subcommittee on Senior High School English is continuing to search for additional materials. At the present time, for example, several new texts and references are being used experimentally in a number of Alberta senior high schools. Those which meet favor will, as soon as possible, be added to the approved lists.

ENGLISH 10

I. INTRODUCTION

English 10 is a course which:

1. Correlates literature, language and composition.
2. Provides opportunity for the student to acquire competence in the basic skills of reading, writing, speaking, listening and viewing.
3. Includes a wide range of literary, linguistic and multi-media materials to enable teachers to meet the needs of students of varying abilities and interests.
4. Places more responsibility for learning directly on the student, fosters critical and independent thinking, and develops an interest in the language arts.

II. CONTENT AND RECOMMENDED TEXTS

A. LANGUAGE TECHNIQUES AND COMMUNICATION SKILLS

Fleming, Harold and Allan Glatthorn.

Composition: *Models and Exercises 10*. Harcourt, Brace & World, 1965.

B. PROSE

1. THE SHORT STORY

A minimum of ten to be selected for class study and/or independent reading.

Maline, J. L. and James Berkley (eds.), *Approaches to Literature, Vol. I: Studies in the Short Story*. Random House, 1967.

2. THE NOVEL

At least one to be studied from the following list:

Clarke, A. C., *Childhood's End*.

Creighton, Luella, *High, Bright, Buggy Wheels*.

Dickens, C., *Oliver Twist*.

Du Maurier, D., *The Scapegoat*.

Forester, C. S., *The African Queen*.

Guareschi, G., *The Little World of Don Camillo*.

Hersey, J., *Hiroshima*.

Hunt, Irene, *Up a Road Slowly*.

McLean, A., *Ice Station Zebra*.

Shute, Neville, *Trustee From The Toolroom*.

Stead, J. C., *Grain*.

Stevenson, Robert L., *Kidnapped*.

Stewart, Mary, *Nine Coaches Waiting*.

Wyndham, John, *The Day of the Triffids*. (School Edition).

Wyndham, John, *The Chrysalids*.

3. NON-FICTION (if time and student interest permit)

Durrell, G., *My Family and Other Animals*.

Heyerdahl, T., *The Kon-Tiki Expedition*.

Keller, Helen, *The Story of My Life*.

Maxwell, G., *Ring of Bright Water*.

Mowat, Farley, *Never Cry Wolf*.

Steinbeck, J., *Travels With Charley*.

C. DRAMA

1. THE ONE-ACT PLAY

Gassner, John, and Frederick H. Little. *Reading and Staging the Play*.
Holt, Rinehart & Winston, 1967.

2. THE SHAKESPEAREAN PLAY (One of the following):

A Midsummer Night's Dream.

As You Like It.

The Merchant of Venice.

The Taming of the Shrew.

3. THE FULL-LENGTH MODERN PLAY (if time and student interest permit):

Cassella, Alberto, *Death Takes a Holiday*.

Chayevsky, P., *Marty*.

Hamilton, P., *Angel Street (Gaslight)*.

McCullers, C., *A Member of the Wedding*.

Rand, A., *Night of January Sixteenth*.

Rose, R., *Twelve Angry Men*.

Rostand, E., *Cyrano de Bergerac*.

Shaw, G. B., *Androcles and the Lion*.

Ustinov, P., *Romanoff and Juliet*.

D. POETRY

Eckersley, Wm., *Impact*. J. M. Dent, 1968. **OR**

McLuhan, M. and R. J. Schoeck. *Voices of Literature — Book I*.
Holt, Rinehart & Winston, 1969.

ENGLISH 13

I. INTRODUCTION

In English 13 the emphasis is on the language skills of listening, reading, speaking, viewing and writing as they relate to the needs of everyday life, with every attempt being made to integrate these areas. Through the use of a wide variety of appropriate materials, students are expected to increase both their interest and skill in understanding and interpreting ideas, and in expressing them in clear, accurate, effective speech and writing.

II. COURSE PURPOSES

1. To provide a course for students who have a record of difficulty in English.
2. To provide a continuing pattern of English 13, 23, and 33.

Note: Enrolment in English 13 does not bar a student from preceeding to any Grade XI course in the English program.

III. RECOMMENDED MATERIALS

- A. Cline, Joy, Ken Williams, and Dan Dolan. *Voices in Literature, Language and Composition — Book 2*. Ginn & Company, 1968.

AND

- B. One or more of the following :

Adamson, J., *Born Free*.
 Bodsworth, F., *The Sparrow's Fall*.
 Braithwaite, E., *To Sir With Love* (Bodley—Head School Edition).
 Brickhill, P., *The Great Escape*.
 Burnford, S., *The Incredible Journey*.
 Durrell, G., *The Bafut Beagles*.
 Falkner, J., *Moonfleet*.
 Gaddis, R., *Bird Man of Alcairaz*.
 Griffin, J., *Black Like Me*.
 Haggard, R., *King Solomon's Mines*.
 Jackson, S., *The Haunting of Hill House*.
 Killilea, M., *Karen*.
 London, J., *Call of the Wild*.
 London, J., *The Sea Wolf*.
 Mowat, F., *Never Cry Wolf*.
 St. Pierre, Paul, *Boss of the Namko Drive* (School Edition)
 Shulman, M., *West Side Story*.
 Stewart, M., *My Brother Michael*.
 Stolz, Mary, *Who Wants Music on Monday*.
 Treece, H., *The Hounds of the King*.
 Wyndham, J., *The Day of the Triffids*. (School Edition).

AND

- C. One or more of the following :

Barrows, M. W., *Currents in Drama*.
 Bevan, Donald, and Edmund Trzcinski, *Stalag 17*.
 Day, C., *Life With Father*.
 Knott, B., *Dial "M" for Murder*.
 Maloney, H. B., *Plays to Remember*.
 Orr, A. A., *Invitation to Drama*.
 Osborne, J., *On Borrowed Time*.
 Stein, J., *Fiddler on the Roof*.
 Wilder, T., *Our Town*.
 Whitfield, G. J., *Introduction to Drama*.

OPTIONAL

- D. One or more of the following :

Corbin, R., *Currents in Poetry*.
 Eckersley, William, *Impact*.
 Metcalfe, J. and G. Callaghan, *Rhyme and Reason*.
 Rittenhouse, C. et al., *Words on Wings*.
 Rutledge, D., *The Blue Guitar*.
 Smiley, M. B., (Director) *Stories in Song and Verse*.
 Summerfield, G., *Voices I*.
 Weir, C., *Steel and Summer Rain*.

READING 10

Objective

Reading 10 is designed to:

1. Improve the reading skills common to the many types of reading.
2. Give instruction and practice in the reading skills specific to the study materials of the language arts, the social studies, mathematics and the sciences.
3. Encourage and increase reading for enjoyment and appreciation.

Course Materials

According to the needs or interest of his students and his own professional background, the teacher should use *some or all* of the following:

Basic Materials

Smith, N.B., *Be A Better Reader*, Books IV, V and VI (workbooks organized in difficulty sequence).

Science Research Associates, Inc., *Reading Laboratory*, IVa.

Science Research Associates, Inc., *Reading For Understanding*.

These materials should be used, along with the students' authorized subject area textbooks, to answer the first two-named objectives listed above.

Supplementary Materials

Magazines and Newspapers.

Creative Living, IV (selections not taken in English 10 course).

Practical English (weekly published by Scholastic Publications, New York, New York).

Novel or Biography.

Leisure Reading Books.

Some, or all, of the above materials should be used in answer to the last-named objective listed above.

Course Content

The three objectives of the course should receive comparatively equal portions of instructional time, but need not be developed in any set time sequence.

LITERATURE 11

Literature 11 is an elective in English intended as enrichment in the study of humanities for more capable students. The core requirements are two novels, one of which will be a classic; two plays, one old and one modern; and either a biography or an autobiography. For a list of suggested materials consult the Curriculum Guide for Senior High School English.

ENGLISH 20

English 20 is a course correlating the study of literature and the language-arts skills at the Grade XI level.

Objectives

- A. To continue the development of previously acquired knowledge and skills in English so that students will become increasingly proficient in both oral and written communication.
- B. To increase the student's enjoyment and knowledge of various forms of literature and thereby promote a deeper appreciation of its scope and significance.
- C. To foster the student's ability to analyze critically, to think independently, and to evaluate intelligently.
- D. To develop in the student a recognition that, through the study of literature with its inherent relationship to life, he can broaden his understanding of mankind's values, customs, and traits, thereby enriching his own life.

Course Content

A. Prose

1. The Short Story
2. The Essay.
3. The Novel
4. The Mass Media.

B. Poetry

C. Drama

1. The Shakespearean
2. The Modern Play.

D. Language

Texts

I. Prose

- (a) The Short Story
A minimum of ten
Buxton, E. W., *Prose for Discussion*
- (b) The Essay
A minimum of ten
Buxton, E. W., *Prose for Discussion*
- (c) The Novel
Suggested novels for class study (a minimum of one novel must be studied).
- | | |
|--------------------|--|
| Austen, J., | <i>Pride and Prejudice</i> |
| Baumann, Hans, | <i>Sons of the Steppe</i> |
| Cronin, A. J., | <i>The Citadel</i> |
| Dickens, Charles, | <i>A Tale of Two Cities</i> |
| Golding, William, | <i>Lord of the Flies</i> |
| Greene, Graham, | <i>Brighton Rock</i> |
| Hemingway, Ernest, | <i>The Old Man and the Sea</i> |
| Herbert, Frank, | <i>Dune</i> |
| Hilton, James, | <i>Lost Horizon</i> |
| Knowles, John, | <i>A Separate Peace</i> |
| Le Carre, John, | <i>The Spy Who Came in From the Cold</i> |
| Lee, Harper, | <i>To Kill a Mockingbird</i> |
| Orwell, G., | <i>Animal Farm</i> |
| Tey, Josephine, | <i>Daughter of Time</i> |
| Tolkien, J. H., | <i>Lord of the Rings</i> (Part I of Trilogy) |
| Wells, H. G., | <i>The Time Machine</i> |
| West, Morris, | <i>Shoes of the Fisherman</i> |

II. Poetry

Perrine, Laurence, *Sound and Sense*

III. Drama

(One from Section (a) or (b) to be studied.)

- (a) The Shakespearean Drama
- | | |
|-------------------------------|---|
| <i>Julius Caesar</i> | Clarke, Irwin & Co., Toronto, |
| <i>Much Ado About Nothing</i> | 1961, or |
| <i>Richard II</i> | Ryerson Press, Toronto, 1965 (Air- |
| <i>The Tempest</i> | mont Editions), or |
| <i>Twelfth Night</i> | Appleton-Century Crofts, New York (Crofts Classics). |
- (b) The Modern Play
- Kesselring, *Arsenic and Old Lace*, Dramatists Play Service.
- Gibson, William, *The Miracle Worker*, A Bantam Pathfinder Edition, N.Y., Toronto, London, May, 1964.
- Hansberry Lorraine, *A Raisin in the Sun*, A Signet Book, New American Library, 1959, New York.
- Jowdry, Patricia, *Teach Me How To Cry*, Dramatists Play Service.
- Miller, A., *All My Sons*, Macmillan Co. of Canada, Ltd., Toronto. (paperback)
- Rattigan, T., *Separate Tables*, Samuel French Co.
- Peterson, L., *The Great Hunger*, The Book Society of Canada.
- Shaw, George Bernard, *Arms and The Man*, Penguin Books.

Shaw, George Bernard, *Saint Joan*, Penguin Books, 1924, (Last Edition 1965) Great Britain.

Wilder, Thornton, *The Matchmaker*, Dramatists Play Service.

Williams, Tennessee, *The Glass Menagerie*, New Directions Publishing Corporation (in Canada only) 1966, Toronto.

Wouk, Herman, *The Caine Mutiny Court Martial*, Signet.

IV. Language

Ford, Margaret, *Techniques of Good Writing*.

ENGLISH LANGUAGE 21

Course Materials

No assigned text.

Material listed in the *Curriculum Guide*.

English Language 21 is a course designed for Grade XI and XII students who are particularly talented or interested in writing. Experience suggests that such students are to be found at all levels of ability. As much individual assistance and instruction is required of the teacher, the size of the class should be limited to twenty students or fewer. In addition, as no textbook is assigned for the course, a classroom library of books and pamphlets must be made available to the teacher if the course is to be taught effectively.

Course Content

The course covers five content areas: journalism, the essay, the short story, drama and poetry. Teachers may deal with these units in any order or way which is productive of results: but at least some aspect of *all five areas* should be discussed at some time during the school term.

As some of the material discussed in English Language 21 is also found in the compulsory courses, teachers are asked to guard against uneconomical overlapping in their own particular school situations.

UNIT ONE: JOURNALISM

A. — The Writing of a News Story

1. Definition of news.
2. The differences between literary and news writing.
3. The news story (including the lead).

B. — Newswriting Style

1. Use of standard good English.
2. Specific characteristics of newswriting style.

C. — The Writing of a Variety of News Stories

1. General news story.
2. Speech report.
3. Interview story.
4. Sportswriting.
5. Advance and follow-up stories.
6. Feature stories.

D. — Editorial Writing

1. Editorials.
2. Columns.
3. Letters to the editor.

E. — Journalism as a Profession

1. Newspaper writing.
2. Radio and television writing.
3. Magazine writing.
4. Advertising.
5. Public relations.

UNIT TWO: THE ESSAY

A. — Definition of the Essay

1. Historical development of the essay form.
2. Variety of forms.

B. — The Informational Essay

1. The research essay.
2. The critical essay.

C. — The Personal Essay

1. Autobiographical.
2. Reflective.
3. Characterization.
4. Nature.
5. Satirical.

UNIT THREE: THE SHORT STORY

A. — Leading Up to the Short Story

1. The journal (or diary).
2. The personality or character sketch.
3. The plot.

B. — Developing the Short Story

1. The plot outline:
 - (a) An introduction (to attract the reader)
 - (b) Details of the story (in point form)
 - (c) A conclusion (which satisfies the reader).
2. Plot analysis:
 - (a) Situation (time, place, characters, mood, circumstances)
 - (b) Rising action
 - (c) Climax.
3. The twist (the unexpected turn near the end of the story).
4. Conflict.

UNIT FOUR: DRAMA

A. — Leading Up to the Writing of Drama

1. The writing of short scripts (e.g. TV and radio commercials, announcements for use on an intercom).
2. The writing of five- or ten-minute scripts (e.g., informal family discussion).
3. The writing of longer scripts (e.g., school assembly program, a documentary).

B. — Dramatic Writing

1. The writing of dialogue.
2. Stage movement.
3. The one-act play.
 - (a) Plot
 - (b) Character
 - (c) The unities of time and place
 - (d) Stage business or action
 - (e) The dialogue
 - (f) Properties.

C. — Radio and Television Writing

1. The special needs of radio writing.
2. The special needs of television writing.

UNIT FIVE: POETRY

- A. **The Writing of Light Verse**
 - 1. Limerick.
 - 2. Rhyming couplets.
 - 3. Other forms.
- B. **The Writing of Poetry**
 - 1. The definition of poetry.
 - 2. Poetic form.
 - 3. The haiku.
 - 4. The cinquain.
 - 5. The triolet.
 - 6. A variety of forms.
- C. **The Group Composition** (a poem composed by the class or a group of students).

ENGLISH LANGUAGE 22

Communicating Effectively Through Speech and Writing.

Objectives

The general purpose of the course is to enable the student to communicate his ideas clearly and emphatically in speech and in writing.

- A. Through the study of:
 - 1. The History and Development of the Language.
 - 2. Rhetorical and Expository Techniques.
- B. And by using these techniques with new understanding in speaking and writing practice, guided by suitable oral and written models.

Recommended Texts

- Hibbs et al., *Speech For Today*. McGraw-Hill Book Company, 1965.
 Kane and Peters, *Writing Prose*. Oxford University Press, 1964.
 *Kane and Peters, *Writing Prose*. 3rd Edition, 1969.
 Pyles, *The English Language*. Holt, Rinehart and Winston, 1968.

Content**Unit I — The History of Speaking and Writing****A. — The Development of Speech for Communication**

- 1. How Speech Began.
- 2. Formal Public Speaking.
- 3. Development of Communication.
- 4. Effect of Mass Media.

B. — The Development of Writing for Communication

- 1. The History of the Development of the English Language
 - (a) Change in Language Using Examples of Old, Middle and Modern English —
 - i. Derivations
 - ii. Historical Influences
 - iii. Geographical Influences
 - iv. Socio-economic Influences
 - (b) Brief Study of the Changing Grammars
- 2. A General Survey of the Varieties of Modern Writing Forms with Special attention to —
 - (a) The Expository forms of Letter, Essay, Article and Editorial
 - (b) The Categories of Narration, Description, Exposition and Argument.

*In schools embarking on this course for the first time the 3rd Edition is recommended.

Unit II — The Principles And Practice Of Logic And Rhetoric In Spoken and Written English

The Craft of Written and Spoken English

1. Narration
2. Description
3. Exposition
4. Argument.

ENGLISH LITERATURE 21

Course Materials

Inglis, Stauffer and Larson, *Adventures in English Literature*, Gage.

Additional material to supplement the material of the text.

Recordings, tapes, radio and television plays.

English Literature 21 is an elective designed for students in Grades XI and XII who show special interest and reasonable competence in English literature.

The objectives are:

1. To increase the student's power to enjoy good literature through both extensive and intensive study of representative works by the best writers.
2. To develop in the student a sense of literary perspective.
3. To assist the student to relate literary works in a mature way to the society that produced the works.

Course Content

The content of Literature 21 is indicated in a general way by the prescribed text, but individual teachers may place the emphasis differently according to the extent of their own literary scholarship, to that of their students, and to the supplementary materials available.

The sequence of the course is that followed in the text.

Adventures in English Literature begins with several short essays by recent British and Canadian authors. Following this introductory material are eight sections giving, in chronological order, the commonly-recognized periods of English literary history. It should be noted that these periods overlap somewhat, and that the division of the continuous historical process in this way is largely arbitrary; however, the historical and social introductions given in the text form a necessary skeleton for the course, and students should be familiar with their content. Some periods, authors and literary types are better represented than others. (The text is deficient, for example, in the Medieval English section where the literature given is in modern paraphrase rather than in the words of the original.) For this reason teachers may need to supplement certain parts of the text.

Not all of the material given in each section need be covered, and not all of the material covered should be given the same attention. Instead, an intensive study of one or more literary forms (e.g., the drama, the essay, the lyric, or the short story) should be undertaken by the individual student or the class as a whole.

As many Grade XII students study *MacBeth*, the Literature 21 and the English 30 courses should be articulated in the drama section. If the drama is chosen for intensive study, it is recommended that the approach given for the study of *MacBeth* (on page 193 of the text) be used for a similar study of the modern plays in the latter section of the book.

ENGLISH 23 AND ENGLISH 33

Objectives

Although the general objectives of these courses do not differ from those of other English courses (see page 25) the following specific objective is particularly important for English 23 and English 33:

To increase students' interest and skill in reading, in listening, in understanding literature, and in expressing ideas clearly, accurately; and effectively in speech and writing.

Course Material and Content

The content of these courses comprises language and literature in the proportion of 60% language and 40% literature; it is intended, however, that each course be treated as a unit.

A. — LITERATURE

1. English 23

Creative Living, Book 5: Buxton.

One play to be chosen from the following:

Shakespeare: *Julius Caesar*

King Richard The Second

Tempest, *The*

Twelfth Night

Goodrich, H., *The Diary of Ann Frank*

Lawrence, L., and Lawrence T., *Inherit The Wind*

Lerner and Lowe, *My Fair Lady*

Shaw, *Pygmalion*

Hansberry, *Raisin in the Sun*, *A*

Kesselring, *Arsenic and Old Lace*

One novel to be chosen from the following:

Du Maurier, *Rebecca*
 Ferber, *So Big*
 Golding, *Lord of the Flies*
 Lee, *To Kill a Mocking Bird*
 MacLean, *Guns of Navarone*
 McInnis, *Above Suspicion*
 Mitchell, *Who Has Seen The Wind*
 Nardoof and Hall, *Mutiny on the Bounty*
 Schafer, *Shane*
 Steinbeck, *The Pearl*
 Stevenson, *Dr. Jekyll and Mr. Hyde*
 Twain, *Huckleberry Finn*
 Richter, *Light in the Forest*

Leisure Reading

Ten to twenty percent of the evaluation of the students' performance should be based on leisure reading.

2. English 33

Scheld, *Short Stories II*
 Reinert, *Working With Prose*

One play to be chosen from the following:

Voaden: *Four Plays of Our Time*
 Van Druten, *I Remember Mama*
 Patrick, *The Teahouse of the August Moon*
 Hailey, *Flight Into Danger*
 Ibsen, *An Enemy of the People*

Shakespeare: *MacBeth*
Taming of the Shrew
Romeo and Juliet

One or more novels to be chosen from the following:

Ambler, Eric, *A Coffin For Demitrios*
 Bradbury, Ray, *Fahrenheit 451*
 Brickhill, *The Great Escape*
 Clark, Van Tilburg, *The Oxbow Incident*
 Ray, Gabrielle, *The Tin Flute*
 Paton, Alan, *Cry, The Beloved Country*
 Stegner, Wallace, *Wolf Willow*
 Shute, Nevil, *On the Beach*
 Wharton, Edith, *Ethan Frome*
 Wilder, Thornton, *The Bridge of San Luis Rey*
 Hienstra, Mary, *Gully Farm*

B. — LANGUAGE English 23 and English 33

Corbin, Perrin & Buxton, *Guide to Modern English*.
 Scheld, *Short Stories II*.
 Reinert, *Working With Prose*.

The curriculum guide contains many useful suggestions for the handling of these courses.

1. Perrine, Laurence, *Story and Structure*, (Harcourt, Brace & World Inc.).

2. Buxton et al., *Points of View*, (W. J. Gage & Co.).

3. (a) Charlesworth and Lee, *An Anthology of Verse*, (Oxford University Press)

- (b) Leggett, Glen, *12 Poets*, (Rinehart & Co.)
 Chaucer, *Canterbury Tales*, (Croft Classics)
 Coleridge, *Selected Poems*, (Croft Classics)
 Donne, *Selected Poems*, (Croft Classics)
 Keats, *Selected Poems*, (Croft Classics)
 Tennyson, *Selected Poems*, (Croft Classics)
 Hopkins, *Selected Poems and Prose* (Penguin)
 Cummings, *Selected Poems*, (Faber)
 Shakespeare, *Renaissance Poetry* (Prentice-Hall)
Poets of Mid-Century (MacMillan)

4. (See list at end.)

5. (a) Shakespeare:

- Hamlet*
Henry IV (Part 1)
Anthony and Cleopatra
Othello
MacBeth

- (b) Modern Plays:

- | | |
|--------------------|-------------------------------|
| Brecht, Bertold, | <i>The Life of Galileo</i> |
| Ibsen, Henrik, | <i>A Doll's House</i> |
| Miller, Arthur, | <i>Death of a Salesman</i> |
| Shaw, G. B., | <i>Caesar & Cleopatra</i> |
| Sheridan, Richard, | <i>The Rivals</i> |

6. Corbin, Perrin & Buxton, *Guide to Modern English*
(W. J. Gage Ltd.)

Course Content

1. Stories
A minimum of ten stories to be selected for study.
2. Essays
A minimum of ten essays to be selected for study.
3. Poetry
A number of poems to be selected for study.
4. One or more poets from *12 Poets*,
or Chaucer, Coleridge, Donne, Keats, Tennyson, Hopkins,
Cummings, Shakespeare, Poets of Mid-Century.
5. Novels
One or more novels from the list below.
6. Drama
One or more Shakespearean and one or more modern plays from the
list given under Drama. One or more poets to be studied in depth.

Novels

| | |
|--------------------|----------------------------------|
| Bronte, Emily, | <i>Wuthering Heights</i> |
| Callaghan, Morley, | <i>The Many Colored Coat</i> |
| Cary, Joyce, | <i>The Horse's Mouth</i> |
| Conrad, Joseph, | <i>Heart of Darkness</i> |
| Conrad, Joseph, | <i>Lord Jim</i> |
| Dostoevsky, F. M., | <i>Crime & Punishment</i> |
| Dreiser, Theodore, | <i>An American Tragedy</i> |
| Eliot, George, | <i>Adam Bede</i> |
| Forester, E. M., | <i>Passage to India</i> |
| Grove, F. P., | <i>Fruits of the Earth</i> |
| Hardy, Thomas, | <i>Return of the Native</i> |
| Hardy, Thomas, | <i>Tess of the D'Urbervilles</i> |
| Lederer & Brudich, | <i>The Ugly American</i> |
| Lewis, Sinclair, | <i>Arrowsmith</i> |
| Melville, Herman, | <i>Billy Budd</i> |
| Orwell, George, | <i>1984</i> |
| Paton, Alan, | <i>Cry, The Beloved Country</i> |
| Steinbeck, John, | <i>Grapes of Wrath</i> |

UNIT FIVE: POETRY**A. — The Writing of Light Verse**

1. Limerick.
2. Rhyming couplets.
3. Other forms.

B. — The Writing of Poetry

1. The definition of poetry.
2. Poetic form.
3. The haiku.
4. The cinquain.
5. The triolet.
6. A variety of forms.

C. — The Group Composition (a poem composed by the class or a group of students).

ECONOMICS 30**Recommended Text:**

Trimble, *Understanding The Canadian Economy*

Content of Course:

- Unit I.: Introduction to Economics
- Unit II.: Money and Banking
- Unit III.: National Accounts and Business Cycle
- Unit IV.: Public Finance
- Unit V.: Social Services
- Unit VI.: Distribution of Income
- Unit VII.: Demand and Supply
- Unit VIII.: The Business Unit
- Unit IX.: Policies of the Individual Firm
- Unit X.: International Trade
- Unit XI.: Personal Finance
- Unit XII.: Labour
- Unit XIII.: Agriculture
- Unit XIV.: Forms of Economic Organizations
- Unit XV.: Underdeveloped Countries

SECOND LANGUAGES

SEQUENTIAL PROGRAMS IN SECOND LANGUAGES

Specific Objectives

The specific objective of a program in any second language is to enable the learner to acquire a proficiency in communication skills in a language other than his own native tongue. To do this the student should develop the ability to :

- a. understand the second language he is learning as it is spoken by a native speaker;
- b. speak the second language he is learning in everyday situations with reasonable fluency and correctness;
- c. read the second language he is learning easily and with comprehension; and,
- d. communicate in writing anything he can say in the second language he is learning.

All interested students should be permitted to begin the study of an approved second language of their choice on a continuous progress basis so that the amount of time spent in a language program and the course content mastered will enable the student to continue one of the following patterns :

- A. 7, 8, 9, 11, 21 and 31
- B. 8, 9, 11, 21 and 31
- C. 7, 8, 9, 20, 30 and 31
- D. 8, 9, 20, 30 and 31
- E. 10, 20 and 30.

Students utilizing the minimum time suggested in the Junior High School Handbook, i.e., 75 minutes weekly in Grades 7, 8, and 9 or 105 minutes weekly in Grades 8 and 9 should consider pattern C or D. Students spending at least 105 minutes weekly learning a second language in Grades 7, 8, and 9 or 160 minutes weekly in Grades 8 and 9 should consider pattern A or B.

Smaller schools which offer a second language in junior high, may find it useful to consider either pattern C or D as students could proceed directly into the 20 level after completing the junior high sequence. Students beginning the study of a second language at the high school level would begin in Grade 10. In this manner only one program is necessary at the high school level.

FRENCH

In order to meet the requirements of the French program one of the following patterns should be selected with respect to entrance, instructional time and sequence :

- Pattern A: 105 minutes weekly in Grades 7, 8 and 9 leading to French 11, 21 and 31.
- B. 160 minutes weekly in Grade 8 and 9 leading also to French 11, 21 and 31.
 - C: 75 minutes weekly in Grades 7, 8 and 9 leading to French 20 and 30. Interested students should be encouraged to continue with French 31.
 - D: 105 minutes weekly in Grades 8 and 9 leading to French 20 and 30. Interested students should be encouraged to continue with French 31.
 - E: No French in Grades 7, 8 and 9, students begin French 10 in Grade 10.

Course Content at the Junior High Level (Suggested):

| | Patterns A or B | Patterns C or D | Pattern E |
|---------------------------------|------------------------|------------------------|------------------|
| <i>A-LM Level I</i> | Units 1 - 14 | Units 1 - 10 | No French |
| <i>Ecouter et Parler</i> | Lessons 1 - 15 | Lessons 1 - 10 | No French |
| <i>Voix et Images de France</i> | Lessons 1 - 15 | Lessons 1 - 10 | No French |

Course Content at the Senior High Level (Suggested):

| | French 11 | French 20 | French 10 |
|---------------------------------|---|------------------|------------------|
| <i>A-LM Level I</i> | Units 15 - 22 | Units 11 - 18 | Units 1 - 10 |
| <i>Level II</i> | Units 23 - 24 | | |
| <i>Ecouter et Parler</i> | Lessons 16 - 20 | Lessons 11 - 20 | Lessons 1 - 10 |
| <i>Parler et Lire</i> | Lessons 1 and 2 | | |
| <i>Voix et Images de France</i> | | | |
| <i>Premier degre</i> | Lessons 16 - 25 | Lessons 11 - 21 | Lessons 1 - 10 |
| | French 21 | French 30 | French 20 |
| <i>A-LM Level I</i> | | | |
| <i>Level II</i> | | | |
| <i>Level III</i> | Units 25 - 33 | Units 19 - 25 | Units 11 - 18 |
| <i>Ecouter et Parler</i> | | | |
| <i>Parler et Lire</i> | Lessons 3 - 9 | Lessons 1 - 7 | Lessons 11 - 20 |
| <i>Voix et Images de France</i> | | | |
| <i>Premier degre</i> | Lessons 26 - 32 and 3 supplementary readers chosen from the 1500 word category of the LIRE ET SAVOIR Series | Lessons 22 - 32 | Lessons 11 - 21 |
| | French 31 | | French 30 |
| <i>Level III</i> | | | Units 19 - 25 |
| <i>A-LM Level IV</i> | Units 34 - 40 | | |
| <i>Parler et Lire</i> | Lessons 10 - 14 | | Lessons 1 - 7 |
| <i>Lire, Parler et Ecrire</i> | Lessons 1 and 2 | | |
| <i>Voix et Images de France</i> | | | |
| <i>Premier degre</i> | | | Lessons 22 - 32 |
| <i>Deuxieme degre</i> | Lessons 1 - 4 Supplementary reading | | |

NOTE :

1. Only those students who have successfully completed the minimum of time required in French 7, 8, 9 or their equivalent should register in French 11.
2. French 31 (old) may be offered for 1969-70 on approval of the High School Inspector.
3. Either French 21 or French 30 is a prerequisite to French 31.

4. Students who complete French 21 will be eligible to write the matriculation examination in French 30 if they so desire and will receive credit in either one or the other in one year depending on their choice.
5. No student may earn more than twenty credits in high school French.

PREVIOUS RECOMMENDATIONS

FRENCH 20

1. *Le Français Vivant*
 - (a) Lessons 21-35 and the supplementary lesson, pages 266-268
 - (b) Supplementary grammatical points:
 - i. Partitive article
 - ii. Pluperfect
 - iii. Conditional.
2. *New Junior French*
 - (a) Lessons 21 - 40
 - (b) Supplementary grammatical points:
 - i. Past definite
 - ii. Past definite of reflexive verbs.
3. *Premières Années de Français*
 - (a) Lessons 25 - 46
 - (b) Supplementary grammatical points:
 - i. Past definite
 - ii. Delete (b) p. 128 and insert partitive article
 - iii. Quand, lorsque and use of implied future
 - iv. Conditional.

Readers

No reader is prescribed for French 20. However, teachers are encouraged to choose one or more readers from the following list. This list does not prohibit teachers from adding other readers.

| Title | Author | Publisher |
|---|--------------------------|-----------------------------|
| <i>Beginning Readings in French</i> | Milligan | Macmillan |
| <i>Enfants de Paris</i> | C. A. Roe | Longmans |
| <i>A First French Reader</i> | Whitmarsh | Longmans |
| <i>Lectures Choiesies</i> | Steinhauer | Macmillan |
| <i>Premières Lectures Culturelles</i> | Croteau and Selvi | American Book Company |
| <i>Rions Ensemble</i> | Humphreys and Sanouillet | University of Toronto Press |
| <i>Antoine, Chasseur</i> | Lafitte | Macmillan |
| <i>Les Belles Histories</i> | C. A. Roe | Longmans |
| <i>Le Casque Invisible</i> | M. Ceppi | Clarke, Irwin |
| <i>Petits Contes de l'Histoire Canadienne</i> | H. S. Fumerton | Macmillan |
| <i>Roland</i> | Purvis and White | Oxford |
| <i>Berthe aux Grands Pieds</i> | Purvis and White | Oxford |
| <i>Huon de Bordeaux</i> | Purvis and White | Oxford |

The above recommendations for French 20 will be phased out by September, 1970.

FRENCH 30

Text

O'Brien, La France and Jones, *Senior French*.

Course Content

1. Lessons 1 - 28 and Aperçus I to V inclusive.
2. The following selections may be omitted although it is desirable that more advanced students be encouraged to study them.

| | |
|--------------|-------------------------------------|
| Lesson II | pp. 14-16, Parts A and B |
| Lesson IV | p. 33, Parts A and B |
| Lesson VI | p. 49, Part B |
| Lesson XIII | pp. 122-123, Lecture supplémentaire |
| Lesson XX | pp. 198-199, Lecture supplémentaire |
| Lesson XXVII | pp. 270-271, Lecture supplémentaire |
3. Teachers are encouraged to use the various songs in the textbook.
4. *Senior French* contains five appendices (pp. 365-416). These are valuable to teacher and pupil for reference.
5. Preliminary work with the verbs should be attempted before the class begins the book proper. The Schema on p. xii may be used as an introductory guide in teaching and reviewing the tenses. The tenses not covered in the first two years of French will be taught as part of the French 30 course.

The past anterior and the imperfect and pluperfect subjunctive may be met in reading but students will not be tested on these tenses in the June examination in French 30.

Readers

No reader is prescribed for French 30.

GERMAN

GERMAN 10

Text

Rheder, Thomas, Twaddell, O'Connor, *Deutsch Verstehen und Sprechen*.

Related Materials

Use of all teaching aids prepared by the authors to accompany the text book are strongly recommended; the *Teacher's Edition*, the *Übungsbuch* and the TAPE RECORDINGS offer invaluable assistance in teaching this course.

GERMAN 20

Text

Scherer and Wanger: *Contemporary German* (McGraw-Hill) is recommended as an alternative text for German 20, effective September, 1969. The book *Deutsch: Sprechen und Lesen* will be phased out in September, 1970.

Related Materials

Use of all teaching aids prepared by the authors to accompany the textbook are recommended; the Instructor's Handbook, the Workbook, and the Tapes.

Coverage

Chapters 1 - 12.

Previous Recommendations

GERMAN 20

Text

Rheder, Thomas, Twaddell, O'Connor, *Deutsch: Sprechen und Lesen*.

Related Materials

Use of the *Teacher's Manual* and the TAPE RECORDINGS is strongly recommended.

GERMAN 30

Text

Homberger and Ebelke, *Foundation Course in German* (Revised Edition).
Use of the accompanying TAPE RECORDINGS is recommended.

Approach and Coverage

1. Oral competence must be maintained and extended while introducing students to a systematic presentation of formal grammar.
2. The material up to p. 204 should be covered by Christmas.
3. The students' ability to write short paragraphs or compose dialogues on the materials of the textbooks (or similar experiences and situations) must be developed.

Optional Supplementary Reading

No readers will be prescribed for German 30, but the following readers may be recommended as additional reading to students with better-than-average ability.

Kulturlesebuch für Anfänger, Harry Steinhauer, editor, (New York: Macmillan Company, (1961) graded selections dealing with German life and literature.

Kästner, *Emil und die Detektive*, (Clarke, Irwin and Co. Ltd.).

Kästner, *Die verschwundene Miniatur*, (D. C. Heath and Co.).

Glückauf, a magazine appropriate for use in Grades XI and XII, published six times yearly by The House of Grant Ltd., Toronto 16, 29 Mobile Drive.

It is recommended that a copy of a large desk-type German-English, English-German Dictionary be available in every classroom where German is taught.

LATIN

LATIN 10

Recommended Text

Breslove and Hooper, *Latin for Canadian Schools*.

Course Content

Lessons 1 to 27 inclusive; the last English to Latin exercises in each lesson need not be covered, but knowledge is essential of: the first three declensions of nouns; the cases of nouns and their functions; the three declensions of adjectives; the four conjugations in the active in all tenses of the indicative; the imperative; the infinitive; questions; connectives; subordinate clause with ubi, antequam, priusquam, simul atque, cum primum, dum, si nisi and cum; prepositions; place and time expressions.

LATIN 20

Recommended Texts

Breslove and Hooper, *Latin for Canadian Schools*.

Taylor and Prentice, *Selected Latin Readings*.

Course Content for *Latin for Canadian Schools*.

Lessons 28 to 55 inclusive; the last English to Latin exercises in each chapter are not required to be covered. Derivative studies should be done orally. Relative, interrogative, demonstrative, reflexive and intensive pronouns should be taught for reading recognition and use rather than have the students memorize the paradigms.

Course Content for *Selected Latin Readings*.

Section Two, Part I — pages 87-99 inclusive (lines 413-534).

Suetonius et al, *The Life of Caesar*.

LATIN 30

Recommended Texts

Breslove and Hooper, *Latin for Canadian Schools*.

Taylor and Prentice, *Selected Latin Readings*.

Course Content for *Latin for Canadian Schools*.

Lessons 56 to 78 inclusive. The English to Latin should be reduced to a minimum; omit recall and grammatical work on adverbs of place, compounds of fero, and subordinate clauses in indirect discourse.

Course Content for *Selected Latin Readings*.

a. Section one, Part I — pages 31-40 (lines 1-106)

b. Section one, Part II — pages 41-72 (lines 107-412)

Hannibal's Star Rises

Hannibal's Star Sets.

RUSSIAN

Objectives of the Program

1. Ability to carry on everyday conversation in Russian.
2. Ability to read and comprehend Russian which is written in a simple style.
3. A good knowledge of the basic grammar of the language.
4. An acquaintance with Russian culture.
5. An interest in the Russian language and culture.
6. A background knowledge of Russian for students who will pursue scientific studies at the university.

RUSSIAN 10

Text

Doherty and Markus, *First Course in Russian* — Part One.

1. Introductory Chapters
2. Lessons 1 - 16.

RUSSIAN 20

Text

Doherty and Markus, *First Course in Russian* — Part Two.

1. Lessons 17 - 28.

Reader

Recommended but none has been prescribed.

RUSSIAN 30

Text

Doherty and Markus, *First Course in Russian* — Part Three.

Course Content

The course in Russian 30 will cover up to and include Lesson 36 of this text.

Supplementary Readers

One to be chosen for study in addition to the authorized text :

Lermontov, M. I. — *Tamin* (Heath & Company, Boston).

Wiens, Gerhard — *Beginning Russian Reader*, (Holt, Rinehart & Winston).

Sputniki — *The Travelling Companions*, (Ginn & Co.).

UKRAINIAN

UKRAINIAN 10

Texts

Ukrainian by the Audio-Visual Method. Part I has been recommended as an alternative text. Lessons 1-14 are suggested as the content but this may require adaptation.

Slavutych, *Conversational Ukrainian*, Lessons 1-15.

Slavutych, *Ukrainian for Beginners*

- A. Parts I and II in *Ukrainian for Beginners* for detailed study.
- B. Part III of *Ukrainian for Beginners* for oral reading.

UKRAINIAN 20

Text

Slavutych: *Conversational Ukrainian*.

Course Content

1. Review Lessons 1 to 15 from Ukrainian 10 using *Conversational Ukrainian*.
2. Lessons 16-45 inclusive from *Conversational Ukrainian*.
3. Free Reading.

UKRAINIAN 30

Text

Slavutych: *Conversational Ukrainian*.

Course Content

1. Review of grammar and vocabulary of lessons in Ukrainian 10 and 20.
2. Lessons 46-70 in *Conversational Ukrainian*.
3. Appendix (pages 566-576) of *Conversational Ukrainian*.
4. Lessons 71-75 of *Conversational Ukrainian* to be used as enrichment material for advanced students.
5. Free Reading. Continue as in Ukrainian 20 but include at least one novel.

GEOGRAPHY 20

Introduction

The Geography 20 course has been designed to enable the student to learn geography while enquiring as a geographer would. Consequently, emphasis is placed on the acquisition of skills and organizing concepts which will enable the student to understand and attack problems dealing with relations within and among places.

The course is based on a population theme and is divided into four major units which move from an intensive study of the local area, through the rest of Canada, to an examination of world patterns. Since the course is predicated on a discovery approach using the inquiry method, the content is presented through a series of cases which may either be studied directly through field observation or indirectly through sample study or other materials.

Primary References

- A. Boggs, *Maps: How to Read and Interpret Them*, Toronto: Clarke, Irwin and Co., 1952.
- A. Gunn, *Patterns in World Geography*, Toronto: Gage, 1968.
- N. Scarfe, et. al., *A New Geography of Canada*, Toronto: Gage, 1963.

Secondary References

Please consult the Senior High School Curriculum Guide for Geography 20.

Objectives

1. The student should acquire an understanding of the following major organizing concepts in geography: areal association, density, human occupancy, pattern, region, scale, spatial distribution, spatial interaction.
2. The student should acquire facility in the use of the geographer's mode of inquiry and skills such as the following:
 - (a) the reading and interpretation of aerial photographs, maps, pictures, tables and graphs, and other written source materials.
 - (b) fieldwork processes of observation and recording.

3. The student should have the opportunity to develop positive attitudes in relation to the following topics:
- (a) respect for scientific method
 - (b) knowledge of multiple causation
 - (c) interdependence of peoples
 - (d) respect for similarities and differences of peoples
 - (e) clarification of values in respect to other value systems.

Course Content

Unit I — The Change in Settlement Patterns in the Local Area

- (a) Study of the neighbourhood
- (b) The relationship of the neighbourhood to the larger settlement area
- (c) The problem of place

Unit II — Settlement Patterns in Western Canada

- (a) The human occupance of Western Canada
- (b) The human occupance of regions of Western Canada
- (c) Depth studies of regions

Unit III — Settlement Patterns in Eastern Canada

- (a) The human occupance of Eastern Canada
- (b) Depth studies of regions
- (c) Studies of larger regions in Eastern Canada

Unit IV — World Patterns

NOTE: It is suggested that the first topic and at least three others be chosen for study in this unit.

- (a) The human occupance of the world
- (b) Cities of the world
- (c) Agriculture of the world
- (d) Japan: case study of industrialization
- (e) World industry and resources
- (f) Landforms and land use
- (g) Climate and man

HEALTH AND PERSONAL DEVELOPMENT 10

Primary References

1. Chittick, *Health For Canadians*.
2. Geisel, *Personal Problems*.

Teachers' References

It is felt that a teacher offering the course at any or all grade levels should have access to the following references :

- (a) Sorenson and Malm, *Psychology For Living*.
(If a copy of Averill's *Introductory Psychology* is available it will be useful as an alternative.)
- (b) Wheatley and Hallock, *Health Observation of School Children*.

Teachers will find one or more of the following references useful for background material in those sections of the course in Grades IX and X dealing with alcohol :

- (a) *Manual of Reference For Alcohol Education*,
Department of Education, Manitoba.
- (b) *Manual of Reference For Alcohol Education*,
Department of Education, British Columbia.
- (c) Hirsch, *Alcohol Education, A Guide Book For Teachers*.
- (d) McCarthy, *Teen-agers And Alcohol*.

Course Content

Unit 1 — Success In High School

Orientation
Learning

Unit 2 — Our Physical Growth Into Adulthood

The Nature of the Body
Functions of the Body

Unit 3 — Canada's Progress in Public Health

Why Public Health Services ?
Improvement of World Health
The General Health Picture in Canada
Canada's National Health Program
Growing Recognition of the Alcohol Problem.

Unit 4 — Public Health In Alberta

Importance of Health Statistics
Public Health Measures in Alberta.

Unit 5 → Personality

The Meaning of Personality
Character
Personality Under Stress.

Unit 6 — Group Life

The Group's Responsibilities to the Individual
The Family Group
The Group and Leisure Time.

Unit 7 — Man's Marvellous Control System

The Nervous System and Its Work
Disorder in the Nervous System.

Unit 8 — Preventing Accidents and Meeting Emergencies

Protection in Public Transportation
Safety in Recreation
Safety in Industry
Alcohol and Safety.

Unit 9 — Selecting a Vocation

The Importance of Career Planning
The Importance of Interests and Aptitudes in Choosing a Vocation
Personality and Its Relationship to Vocational Choice
Job Families and Job Opportunities
Making the Most of Opportunities to Secure Employment
Effective Procedures in Applying for a Job
Making Good on the Job.

HOME ECONOMICS

HOME ECONOMICS 10

Objectives

1. Provision of knowledge for the student without previous experience in home economics who is unlikely to have the opportunity to take further courses in home economics beyond this one year.
2. Development of interest in home economics and establishment of an understanding of good management in all areas.
3. Development of adequate basic skills to provide sufficient background for more advanced homemaking.

Unit 1 — Management

- A. — Definition of Management.
 1. Management in all areas.
 2. Steps to good management.
- B. — Time management.
- C. — Energy management.
- D. — Money management.

Unit 2 — Managing Family Meals

- A. — Management of meal work.
- B. — Guides to good eating.
- C. — Attractive meal service.
- D. — Better breakfasts.
- E. — Family luncheons.
- F. — Family dinners.
- G. — Entertaining.

Unit 3 — Home Management

- A. — A well kept home.
- B. — The family wash.
- C. — Cleaning the home.
- D. — Electrical appliances.

Unit 4 — Clothing Selection and Construction

Choice of Project: Suggested project is a shirtwaist dress made of firm fabric.

- A. — Good grooming.
- B. — Wardrobe planning and selection.
- C. — Textile study.
- D. — Construction of garment.

ELECTIVES — At least one to be studied.

1. A Girl's Room

- A. — A well kept room.
- B. — Privacy.
- C. — Art principles applied to room furnishings.
- D. — Arrangement for convenience and safety.
- E. — Use of storage space.
- F. — Room improvements.
- G. — Window treatments.
- H. — Making a room cheerful and attractive.

2. Girl's Social Calendar of Activities

- A. — Entertaining for special days.
- B. — Party themes.
- C. — Other possibilities for entertaining.
- D. — Three types of parties :
 - 1. Casual
 - 2. Informal
 - 3. Formal.
- E. — Party etiquette.

3. Home Related Arts and Crafts

Discuss principles of design and color and a number of crafts in preparation for planning and making one craft which expresses individuality.

4. Children's Clothing

- A. — Suitable clothing for children.
- B. — Pattern selection.
- C. — Choice of fabrics.
- D. — Construction of chosen garment.
- E. — Evaluation.

5. Remodelling Clothes

- A. — Satisfaction in remodelling.
- B. — Requirements of make-over garment.
- C. — Designing garment.
- D. — Construction of garment.

References

- Campion, Carson and Ramee, *Planning and Preparing Meals*. McGraw Hill Company.
- Pollard, *Experiences in Homemaking*. Ginn and Company.
- Pollard, *Experiences in Clothing*. Ginn and Company.
- Raines, Margaret, *Managing Livingtime*. Prentice Hall of Canada.

HOME ECONOMICS 21

"LOOKING AHEAD TO HOME LIVING"

Text

- Craig, Hazel Thompson, *Thresholds To Adult Living*. Copp Clark Company.

Objective

This course is designed to prepare students for their future. Students are made to realize the responsibilities they will have in the future and how best to meet them.

Unit 1 — Personal and Family Relations

- A. — Understanding and development of self.
- B. — Friendships.
- C. — Achieving maturity.
- D. — Accepting one's role as a community member.

Unit 2 — Your Vocational Future

- A. — Planning ahead.
- B. — Getting and keeping a job.
- C. — Growing up socially.
- D. — Looking ahead to marriage.

Unit 3 — Preparing and Serving Quicker Meals

- A. — Food fundamentals for two or ten.
 - 1. Choice of foods :
 - (a) Canada's Food Guide.
 - (b) Nutrients.
 - (c) Calories.
 - (d) Food additives.
 - (e) Shopping for food.
- B. — Planning meals for two.
 - 1. Simplifying work by using good management.
 - 2. Eating better for less.
- C. — Entertaining.
- D. — Aids to quick cooking.
- E. — Preparing the unusual.

Unit 4 — Clothing Selection, Construction and Care

Project

Each student will be required to complete one garment — basic dress or basic outfit for girls and sports shirt or pyjamas for boys. The choice of fabric and finishing details will depend upon the previous experience of the students.

- A. — Clothing and social acceptance.
- B. — Better buymanship.
- C. — Clothing choice.
- D. — Textile study.
- E. — Garment construction.
- F. — Clothing care.

Unit 5 — Finding and Furnishing a Home

- A. — Choosing a home.
- B. — A good house plan.
- C. — Color in the home.
- D. — Furniture selection and arrangement.
- E. — Fixed background of a room.
- F. — Window treatment.
- G. — Accessories for the home.
- H. — Selection of tableware, linens, and appliances.
- I. — Care of the home.

Unit 6 — The Baby and the Family

- A. — Looking forward to having children.
- B. — Prenatal care.
- C. — Care of the baby.
- D. — Development of baby.
- E. — Development of desirable habits.
- F. — Community responsibility for welfare of children.

References

- Craig and Rush, *Homes With Character*. Copp Clark Company.
- Department of National Welfare, *Canadian Mother and Child*. Department of Welfare, Ottawa.
- Judson and Mary Landis, *Personal Adjustment — Marriage and Family Living*. Prentice Hall of Canada Limited.
- Pollard, *Experiences in Foods*. Ginn and Company.
- Wilson, *Sewing A Fine Seam*. Revised edition, McGraw Hill Company of Canada.

FABRICS AND DRESS 10

Division of Time: Practical—4 periods; Theory—1 period.

Objectives

- 1. To develop good judgment in selection of style and fabric.
- 2. To realize selection and construction of garments expresses personality.
- 3. To realize care of one's clothing is a responsibility.
- 4. To learn to construct garments of varying difficulty.

Unit 1 — Getting Ready to Sew

- A. — Use and care of sewing machine.
- B. — Selection and care of sewing equipment.
- C. — Introductory practice project.

Unit 2 — Good Grooming

Qualities :

- A. — Poise.
- B. — Good taste.
- C. — Body care.
- D. — Good appearance.

Unit 3 — Construction Techniques

- Projects: (1) Classic slim skirt.
(2) Simple classic blouse or shirt.
(3) Summer dress.

Alternate projects: (1) sports wear.
(2) sleep wear.
(3) duster or housecoat.

N.B. — Limited to firmly woven cotton blend. Wool for skirt.
Minimum — three projects. Stress quality rather than quantity.

A. — Selection of pattern:

- Suitable for: (1) figure.
(2) age.
(3) occasion.

B. — Selection of material:

- Suitable for: (1) pattern.
(2) occasion.
(3) girl.

Consider performance and cost.

C. — Pattern — selection and special features.

D. — Personal measurements:

- (1) correct size.
(2) correct figure type.

E. — Preparation of material:

- (1) stress grain perfection.
(2) truing the material by:
(a) tearing.
(b) pulling a thread and cutting.

F. — Placing fabric.

- (1) layout.
(2) cutting.
(3) marking.

G. — Assembly and fitting:

— stress unit method.

H. — Construction processes:

- (1) seams and seam finishes.
(2) pressing.
(3) buttonholes.
(4) plackets and zippers.
(5) sleeves.
(6) collars and cuffs.
(7) finishing techniques, hooks and snaps, buttons, etc.,
carefully executed.

Unit 4 — Fibers and Fabrics

A. — Weaves— plain, twill, satin, sateen, pile, leno.

B. — Dyeing— yarn, piece, printing.

C. — Finishes— mechanical, chemical.

—Students should be familiar with common types of cotton fabrics and simple weaves.

—COTTON—used in dress: sources; characteristics; identification; uses; and care.

—WOOL—used in skirt; sources; uses; and care.

—SYNTHETICS—introduce briefly—arnel; terylene; nylon; orlon.

Unit 5 — Shopping

Consider:

- A. — Core (basic) wardrobe.
- B. — Addition of co-ordinates to the core wardrobe.
- C. — What to look for when we buy.
- D. — Information given by a good label.
- E. — What a consumer should know about a garment.

References

Erwin, *Clothing For Moderns*. Brett Macmillan Company.
Carson, *How You Look and Dress*. McGraw Hill Company.
Potter and Corbman, *Fiber To Fabric*. McGraw Hill Company.
Wilson, *Sew A Fine Seam*. Revised, McGraw Hill Company.

FABRICS AND DRESS 20

Division of Time: Practical—4 periods; Theory—1 period.

Objectives

- 1. Stress the principles of good management.
- 2. Make pupils aware of the many decisions to be made wisely in buying fabrics and ready-mades.
- 3. Encourage pupils to appreciate good design which includes function and beauty.

Unit 1 — Core Wardrobe

- A. — Definition.
- B. — Clothing inventory.

Unit 2 — Projects

- A. — A fully lined WOOL basic dress.
- B. — A slim basic wool skirt (a) drafted.
(b) remodelled.
- C. — A dress or blouse of silk or a silk-like material.

Unit 3 — Fibers and Fabrics

- A. — Fibers (1) basic.
(2) staple.
- B. — Weaves (1) basic.
(2) woven in.
(3) embroidered.
- C. — Knitting — felting — braiding.
- D. — Finishes.
- E. — Study — Wool and hair fibers

source — countries

Silk

uses — manufacture — care —
performance

F. — Types of Man-Made Fibers — according to generic names:

- (1) Cellulosics — rayon
— acetate
— triacetate.

- (2) Long chain polymers — nylon olefin
 modacrylic saran
 acrylic vinyon
 polyester vinyl
 spandex nytril
- (3) Fibers manufactured from nonfibrous material substances —
 glass
 metallic
 rubber (used as a core for elastic thread)
 azlon.

Unit 4 — Economics of Clothing

- A. — Study labels and hang-tags.
- B. — Comparison — ready-mades; hand-mades; custom-mades.
- C. — Types of buyer.
- D. — Budgets.

References

Chambers and Moulton, *Clothing Selection*. Longmans Canada Limited.
 Potter and Corbman, *Fiber To Fabric*. McGraw-Hill Company.
 Sturm and Grieser, *Guide To Modern Clothing*. McGraw-Hill Company.
 Wingate, *Know Your Merchandise*, McGraw-Hill Company.

FABRICS AND DRESS 30

Division of Time: Practical—4 periods; Theory—1 period.

Objectives

1. An execution of custom dressmaking techniques.
2. Understand general standards of good fit.
3. Become a more capable consumer.
4. Develop a more pleasing personality.

Unit 1 — Advanced Clothing Construction

Project I — A tailored suit or coat; or a wool skirt and jacket:

- (1) principles of good tailoring
- (2) delicate stitching
- (3) correct finishing details.

Project II — Special occasion dress — a graduation dress, a bridesmaid dress, or a formal:

- (1) challenged by a luxury fabric
- (2) couturier technique
- (3) fine hand-stitching
- (4) delicate finishing details.

Unit 2 — Textile Research

- a brief view of weaves and finishes.
- Continued study of the man-made fibers being used today, stressing their performance and care. Read and study available textile books, updated pamphlets, take field trips, etc.

Unit 3 — Consumer Education

Consider:

- A. — Careful planning.
- B. — Thoughtful buying.
- C. — Proper care of clothes.
- D. — Personal influences.
- E. — Personal finances.
- F. — Inventory and hang-tag file.
- G. — Buying points.
- H. — Shopping plans.
- I. — How to buy ready made.

References

Chambers and Moulton, *Clothing Selection*, Longmans Canada Limited.
Sturm and Grieser, *Guide To Modern Clothing*, McGraw-Hill Company.
Wilson, *Sew a Fine Seam*, Revised, McGraw-Hill Company.
Wingate, *Know Your Merchandise*, McGraw-Hill Company.

FOODS AND NUTRITION 10

Texts

L. Belle Pollard, *Experiences With Foods*, Canadian Edition, Ginn and Company
OR

Campion, Carson and Ramee, *Planning and Preparing Meals*, Canadian Edition, McGraw-Hill Company.
McDermott, Trilling and Nicholas, *Food for Modern Living*, McClelland and Stewart.

Division of Time: Practical—4 periods; Theory—1 period.

Objectives

The development of the ability to select and prepare an adequate family diet with due attention to nutrition, standard methods, cost, time available, correct service, and necessary home management for smooth running of the kitchen, dining room and laundry.

Scope

A.—Nutrition.

Sequence

1. Canada's Food Guide.
2. Source and function of food nutrients.
3. Criticism of popular meals from nutritional standpoint.
4. Correction of faulty nutrition applied to individual students.

B.—Meal Planning.

1. Planning and analysis of balanced meals.
2. Intelligent spending of the food dollar — consumer buying.
3. How to be an intelligent buyer by: reading labels, knowing grades, studying advertising.

C.—Table Setting and Etiquette.

1. Choose table appointments — to harmonize with the room and furniture.

Scope

Sequence

2. Study table appointments — linen, cutlery and silver, china, glass and crystal, table centres.
3. Table setting, service and etiquette.
4. Develop poise and ease through actual practice and practical application.

D.—Laundry.

1. Launder towels, aprons and table linen used in the cookery laboratory.
2. Learn about soaps, synthetic detergents, hardness of water, water softeners, blueing, etc.
3. Remove simple stains found on school linen.

E.—Planning and Preparing Snacks and Simple Teas.

1. How to be a good manager, plan menus, use tested recipes, make market lists, and time schedules.
2. How to work efficiently — correct use of equipment and measurements.
3. How to be an efficient housekeeper — kitchen arrangement, dishwashing, care of equipment, sanitation in kitchen, safety.
4. Grooming, personal cleanliness. Suitable dress for all occasions.
5. Learn to make sandwiches, dips, garnishes, beverages, simple cookies.

F.—Planning, Preparing and Serving Breakfasts.

1. Planning simple family breakfast.
2. Food theory developed for each topic:
 - a) Value in diet.
 - b) Classification and characteristics.
 - c) Standard methods of preparation.
 - d) Source of product.
 - e) Where to use.
 - f) How to serve.
 - g) Comparison with perfect product for evaluation.
3. Foods in breakfast pattern:
 - a) Fruits (fresh, cooked, frozen, and dried).
 - b) Cereals — new ways of serving.
 - c) Quick breads — muffins, griddlecakes, waffles, tea biscuits. Syrup for griddlecakes.
 - d) Eggs — poached, scrambled, baked, shirred, omelettes, etc.
 - e) Bacon, ham, sausage.
 - f) Beverages — milk, coffee, cocoa.

G.—Foods in the Luncheon Pattern.

1. Plan and serve simple family luncheons.
2. Follow outline suggested in F. (2).

Scope

Sequence

3. Foods in the luncheon pattern:
 - a) Cream soups, chowders, white sauce.
 - b) Cheese.
 - c) Casseroles.
 - d) Meats — inexpensive meats—stews—pot roasted—braised—pressure cooked.
 - e) Vegetables — boil, bake, saute, scallop and pressure cook a variety of vegetables.
 - f) Salads and salad dressings.
 - g) Deserts —
 - 1) fruit, milk, custards, simple gelatin.
 - 2) dessert sauces.
 - 3) butter cakes and icings.
 - 4) pastry — double crust pies, single crust pies, tarts.

H.—Foods for Special Occasions.

1. Candy — fudge.
2. Cookies — bar, drop, refrigerator, rolled, moulded, etc.
3. Fruit loaves.

I.—Vocational Possibilities in Food Service.

1. Consider the vocational training offered which will help in finding employment in the food services at:
 - a) Composite high school.
 - b) Vocational high school.
 - c) Home economics department in a university.
 - d) Provincial school of technology.

FOODS AND NUTRITION 20

Texts

L. Belle Pollard, *Experiences With Foods*. Canadian Edition. Ginn and Company.

OR

Campion, Carson, and Ramee, *Planning and Preparing Meals*. Canadian Edition. McGraw Hill Company.

Objectives

1. To develop a desire to assume greater responsibility for the planning and serving of attractive meals in the home in varying circumstances and to plan and prepare nutritious dinners.
2. To develop skill in cookery.
3. To develop the ability to entertain simply yet graciously. Practical work accompanied by theory and evaluation.

| Scope | Sequence |
|--|--|
| A.—Nutrition. | <ol style="list-style-type: none"> 1. Review food theory. Study deficiency diseases due to the lack of an essential nutrient. 2. Consider the individual food needs of children under- and over-weight and convalescent. 3. Digestion and absorption. |
| B.—Meal Management. | <ol style="list-style-type: none"> 1. Review meal patterns for breakfast, luncheon and dinner; table setting and etiquette. 2. Meal management includes, time and money management, housekeeping, market orders, time schedules, evaluation. |
| C.—Money Management in Meal Planning. | <ol style="list-style-type: none"> 1. The food dollar. 2. Budgets and accounts. |
| D.—Kitchen Management. | <ol style="list-style-type: none"> 1. Floor plan of well arranged kitchen. 2. Principles of arrangement of supplies and equipment. 3. Selection of kitchen equipment. (Large and small.) 4. Care of equipment. |
| E.—Laundry. | <ol style="list-style-type: none"> 1. Review Foods and Nutrition 10 — school laundry. |
| F.—Preservation of Food. | <ol style="list-style-type: none"> 1. Causes and ways to prevent food spoilage. 2. Preservation of foods — all types including freezing. |
| G.—Cookery Based on Dinner Preparation — advanced cookery—include what has not been covered in Foods and Nutrition 10. | <ol style="list-style-type: none"> 1. Appetizers — stock soup, canapes, cocktails. 2. Yeast breads and rolls. 3. Salads — mayonnaise and French dressing. 4. Proteins — more expensive cut of beef, pork, liver, chicken, fish. 5. Vegetables — new varieties with sauces. 6. Deep fat frying. 7. Cakes — all types. 8. Pastry — new types. 9. Desserts — gelatin, ice cream, sherbets, simple and elaborate desserts. 10. Special occasion food — Christmas and Easter cookery — candy. |
| H.—Vocational Opportunities in the Food Services. | <ol style="list-style-type: none"> 1. Review outline in Foods and Nutrition 10. 2. Specialized fields, catering, food technician, dietitian, etc. |

FOODS AND NUTRITION 30

Text

Helen Wattie and Eleanor Donaldson, *The Nellie Pattinson's Canadian Cook Book*. Ryerson Press, 1961.

Objective

To give a thorough working foundation as a basis for homemaking or for a career.

Scope

Sequence

- | | |
|--|--|
| A.—Preservation of Food. | 1. Review theory—choose to do two new problems. |
| B.—Planning and Serving Meals. | 1. Review informal service. Serve one formal meal. 2. Suggested meals; low cost, quick meals, freezer meals, outdoor meals, oven meals, the career girl entertains. |
| C.—Nutrition. | 1. Review nutritional requirements for a normal diet. 2. Study nutritional requirements in abnormal conditions which require special diets. 3. The invalid tray. |
| D.—Large Quantity Cookery. | 1. Study with reference to school and community functions. 2. Practical application — school party refreshments, cafeteria, graduation. 3. Take field trips to hospitals, etc. |
| E.—Management of Resources. | 1. Your role as a consumer. 2. Planned spending — budgets and accounts. 3. Credit buying. |
| F.—The Kitchen. | 1. Planning a kitchen, cabinets, finishes, floors, etc. 2. Choosing and buying large equipment. |
| G.—Demonstrations. | 1. Teacher demonstrates to establish principles. 2. Students do at least one demonstration. |
| H.—Regional or National Dishes. | 1. Demonstration and practical cookery. 2. Use of seasonings — herbs, spices. |
| I. —Cookery projects and Research —discuss value and purpose. —choose areas of study —group or individual study —evaluate results. | 1. Suggested projects: a) Appetizers b) Vegetables c) Meat d) Casseroles e) Salads f) Quick breads g) Pastry h) Yeast breads i) Cakes j) Cookies k) Fancy desserts l) Mixes. |
| J. —Vocational Opportunities | 1. Do a thorough study of vocational opportunities. 2. Analyzing jobs — applying for a job. |

INDUSTRIAL ARTS

SAFETY NOTE

Every industrial arts laboratory must have an effective safety program. The teacher must be vigilant to provide adequate and continuous supervision so that safe practices are followed in all laboratory activities.

General Objectives

1. To develop an understanding of related technological clusters and the interrelationship of technologies within the cluster areas.
2. To develop an understanding of the applications of the academic disciplines in an industrial environment.
3. To present an environment which stimulates the individual to discover and develop his interests and talents.
4. To develop an understanding of man's changing role in an advancing industrialized society (the changing concept of work).

Two programs in Industrial Arts have been developed for the senior high school. Program I is a three-year program entitled Industrial Arts General 10, 20 and 30, with four units of activity selected each year from the twenty-one listed. Program II consists of a three-year sequence of courses in each of four cluster areas: Electronics, Materials, Graphic Communications and Power Mechanics.

PROGRAM I

INDUSTRIAL ARTS GENERAL 10, 20, 30

The Industrial Arts General program consists of a series of three courses. Each course requires the completion of four units of study selected from the twenty-one units listed. There should be no repetition of units over the three courses. In schools where there is only one laboratory these units should be selected from three of the five different clusters as listed below.

Following are the clusters and the units in each:

- | | |
|---|---------------------------------|
| A. Electronics | — Basic Electricity-Electronics |
| | — Systems |
| | — Units of the System |
| | — Components |
| B. Materials | — Wood |
| | — Metals |
| | — Plastics |
| | — Earths or Textiles |
| C. Graphic Communications | — Drafting |
| | — Photography |
| | — Printing Processes |
| | — Printing (continued) |
| D. Power Mechanics | — Internal Combustion Engine |
| | — Other Power Sources |
| | — Hydraulics and Pneumatics |
| | — Mechanical Transmission |
| E. Special Units for Industrial Arts General | — Research |
| | — Production Science |
| | — Hot Metals |
| | — Building Construction |
| | — Food Science |

PROGRAM II**INDUSTRIAL ARTS MATERIALS 10, 20, 30****Introduction**

The materials cluster introduces students to a number of processes used to shape and form materials to man's uses. The study includes an introduction to the equipment and machines used in the materials industry so that principles of operation and safe control are understood. Materials testing is integrated in this study so that students understand the need for careful selection of materials for a particular use.

Specific Objectives

1. To provide an opportunity for students to gain basic concepts on how materials are shaped, formed and fastened.
2. To give students an opportunity to learn to use and handle equipment correctly and safely.
3. To introduce students to the many occupational areas related to materials and their fabrication.

The course consists of four units each year in wood, metals, plastics and one craft material chosen from ceramics, leather, lapidary, textiles. Each unit is developed under the following headings:

- 1) Layout and Design.
- 2) Sources and Applications.
- 3) Hand Processes.
- 4) Machine Processes.
- 5) Fasteners.
- 6) Finishing.
- 7) Occupational Information.

MATERIALS 10**I. Wood**

- Layout
- Identification and use, testing
- Hand tools and processes — planing, chiseling, boring, sawing
- Machine processes — surfacing, turning, sawing
- Fastening — nails, screws, glue
- Finishing — sealer, filler, oil, varnish, wax
- Occupational information

II. Metal

- Layout in metal — tape, ink
- Identification and source — manufacture of steel, testing
- Hand processes — shaping, sawing, filing, drilling
- Machine processes — grinding, drilling
- Fastening — rivetting, soldering, screws and bolts
- Finishing — paint
- Occupational information

III. Plastics

- Design in acrylics, butyrates, vinyls
- Cutting, filing, machining processes
- Heat forming
- Fastening with cements, solvents, mechanical means
- Finishing processes — coloring, buffing, polishing
- Industrial uses and occupational opportunities

IV. Craft Materials

Only one of the following crafts may be selected each year of the program:

(1) Leather

- Selection, uses and design
- Leather industries of Alberta
- Processes — cutting, carving, creasing, lacing
- Fasteners — sewing, rivetting, glues, snaps

(2) Ceramics

- Source and testing of materials
- Industrial applications
- Shaping and forming ceramics products — slab, coil, wheel, slip, molding
- Firing
- Finishing — glazes
- Occupational information

(3) Lapidary

- Identification and sources of materials
- Processes of cutting, grinding, lapping, tumbling, faceting, polishing
- Use of fasteners

(4) Art Metal

- Design principles
- Materials
- Processes — cutting, filing, soldering, drilling, annealing, pickling, forming, twisting, beating, spinning
- Finishing, — planishing, fleeting, chasing, stamping, stipling, embossing

MATERIALS 20

I. Wood

- Blueprint reading, planning procedure and bills of materials
- Imported woods — use and characteristics
- Tool processes — dados, grooves, chamfers, rabbets, turning, routing
- Bending, laminating, veneering and testing wood materials
- Fastening — joints, glues and adhesives
- Finishing — lacquers, varnish, Swedish oil, polishing
- Wood industries and occupational opportunities

- II. Metal
 - Metal symbols
 - Metallurgy — hardening, heat treatment, annealing, tempering
 - Machine processes — turning, shaping
 - Finishing with — spray, industrial methods
 - Occupational opportunities
- III. Plastics
 - Design and symbols
 - Processes — heat forming, laminating, blow forming, vacuum forming
 - Tests and experiments in strengths and shaping of plastics
- IV. One craft other than that chosen in Materials 10

MATERIALS 30

- I. Wood
 - Reading architectural drawings
 - Organizing of companies (construction)
 - Selection of building sites
 - Material selection and testing
 - Construction planning
 - Basic design of frame building
 - Construction processes — concrete form design, framing, walls and rafters, roofing, finish carpentry
 - Tool processes — sawing, nailing, conditioning tools
 - Occupational information
- II. Metal
 - Design for mass production
 - Material testing — brittleness, ductility, toughness, malleability, shear torsion
 - Processes — case hardening, work hardening
 - Production processes — copper, bauxite, alloys, aluminum
 - Machine processes — turning, knurling, filing, polishing, tapering, milling a flat surface
- III. Plastics
 - Resins, fiberglass
 - Material processes — embedding, overlay, laminating, molding, fiberglass repair
 - Machine processes — carving, rotational molding, slush mold, injection, extrusion, compression molding, transfer molding
 - Finishing methods
 - Industrial application
- IV. Craft other than taken in 10 or 20.

INDUSTRIAL ARTS ELECTRONICS 10, 20, 30

Introduction

The approach to teaching electronics in the industrial arts courses is to develop basic concepts of:

- first the total system, e.g., record player, superhet, etc.
- second the units that comprise the system e.g. power supply, amplifier, oscillator
- third the components that make up the units, e.g., resistors, capacitors, inductors, etc.
- fourth the physical laws that are operative in the function of the whole system.

Specific Objectives

1. To teach the correct use of common and special instruments and the principles involved.
2. To familiarize students with some of the basic electronic circuits and their applications.
3. To familiarize students with the basic principles and fundamentals of radio and television communications and computer systems.

ELECTRONICS 10

Unit I. — Basic Electricity-Electronics

1. Instrument use: V.O.M., V.T.V.M., Oscilloscope, Ammeter, Voltmeter, Signal Generator
2. Measurement of: current, voltage, resistance
3. Study minimum of two systems from
 - Record Player
 - T.R.F.
 - Superheterodyne
 - Computer
4. Overview of system to include:
 - Input — classification, A.F. or R.F., wave form, strength
 - Output — classification, wave form, strength
 - Identification of units within system

Unit II. — Systems Study

1. Study three systems not studied above from: record player, T.R.F., superheterodyne, computer, transmitter, transistor radio, video, F.M., electronic control. Each to be studied as suggested in (4) above (Unit I).
2. Study basic principles of the following units:
 - Power supply
 - Amplifier
 - Oscillator

Unit III. — Units of a System

1. Assemble, test and compare units:
 - (a) Power supplies — half and full wave
 - (b) Amplifier — audio frequency
 - voltage and power
 - radio frequency
 - (c) Oscillator — Armstrong
 - Hartley

Unit IV. — Components of a System

1. Study components such as: resistors, capacitors, inductors, transformers, tubes, transistors for
 - (a) characteristics
 - (b) construction and production
 - (c) values

ELECTRONICS 20

Unit I. — Systems Review

1. Review systems studied in Electronics 10 and study two additional systems.
2. Review use of instruments to measure: voltage, resistance and current

Unit II. and III. — Units of a System

1. Study the power supply, amplifier and oscillator under the following headings: — types
— function and analysis
— principles of operation
— applications

Unit IV. — Component Study

1. Study the following:
— Ohm's law as it applies to D.C. and A.C. circuits
— Capacitance in A.C. and D.C. circuits
— Inductance in A.C. and D.C. circuits
2. Relate physical and mathematical principles to the components: resistors, capacitors, inductors, transformers, tubes, transistors.

ELECTRONICS 30

Unit I. and II. — Computer Systems

Equivalent of one half year to be spent in the study of computer systems.

Unit III. and IV. — Special Study

Students may spend one half year in research and development of special interest area of:

- industrial controls
- F.M.
- Video
- Computer

DRAFTING

Objectives

1. Provide exploratory experiences.
2. Develop basic skills.

DRAFTING 10

1. Reading working drawings and blueprints.
2. Use of drafting equipment.
3. Geometric constructions.
4. Working drawings — kinds.

DRAFTING 20

1. General review.
2. Geometric construction.
3. Orthographic plate involving circles or arcs of circles.
4. Isometric plate involving circles or arcs of circles.
5. Surface development.
6. Cabinet drawing.
7. One-point perspective drawing.
8. Two-point perspective drawing.
9. Architectural drafting.
10. Aircraft drafting.
3. Congruence (Chapter 10)
4. Converse Statements, Converse Theorems (Chapter 11)
5. Indirect Proof, Inequations (Chapter 12)
6. Parallel Lines (Chapter 13)
7. Areas of Polygons (Chapter 14)
8. Ratio and Proportion, Similar Figures (Chapter 15)

NOTE: Teachers are advised to consult the 1965 Curriculum Guide for Mathematics 10 for suggestive treatment of Chapter 14 and 15.

INDUSTRIAL ARTS GRAPHIC COMMUNICATIONS 10, 20, 30**Introduction**

In Graphic Communications a student will learn about the basic principles of Drafting, Printing, Duplicating and Photography and the interrelationship of the technologies within this cluster.

Specific Objectives

1. To provide an opportunity for students to learn about the basic materials and processes used in the graphics industry.
2. To give students practice in the approved methods and procedures required for drafting, printing, photography and duplicating processes.
3. To acquaint students with the opportunities in the field of graphic communications.

GRAPHIC COMMUNICATIONS 10**Unit I. — Drafting**

1. Mechanical Processes — instrument use
2. Drawing Methods (introduction to)
 - Freehand drawing
 - Orthographic
 - Isometric
 - Pictorial
 - Sectional
 - Machine
 - Electrical
 - Sheet Metal
3. Material Processes
 - Tracing
 - Printing a Drawing
 - Copying Machines
4. Relationship to Industry

Unit II. — Photography

1. Composition and Design
 - Principles of composition
 - Lighting
 - Out-Door photography
2. Materials
 - Types of film
 - Papers
3. Cameras
 - Kinds
 - Parts
 - Functions
 - Use of light meter
 - Electronic flash
4. Material Processes
 - (a) Contact Printing
 - Chemicals
 - Paper
 - Procedures
 - (b) Enlarging
 - Types
 - Functions
 - Procedure
5. Relationship to Industry
 - Career opportunities

Unit III. — Printing and Reproducing Processes

1. Composition and Design
 - Basic type families
 - Terms used
 - Making a layout
2. Materials
 - Paper used
 - Inks
3. Mechanical Processes
 - Typesetting
 - Platen Press
 - Sign Press

Unit IV. — Printing (Continued)

1. Mechanical Processes
 - Kinds of printing, letterpress, intaglio, lithography, flat bed press, cylinder press, rotary press
2. Material Processes
 - Stencil preparation
 - Offset principles
 - Types of masters and their preparation; direct image, transfer image, photographic
 - Principles of copying machines

GRAPHIC COMMUNICATIONS 20

Unit I. — Drafting

1. Mechanical Processes
 - Function and use of drafting machine
2. Projection Methods
 - Orthographic — dimensioning
 - Isometric — from orthographic
 - Pictorial — parallel perspective
 - Sheet Metal — development of curved surfaces
 - Sectional — conventional lines and symbols
 - Architectural — basic principles
 - Machine — threads and other forming methods
 - Symbols

Unit II. — Photography

1. Composition criteria for:
 - landscapes
 - portraits
 - still life
 - animals
 - plants
2. Materials
 - Film characteristics
3. Mechanical and Material Processes
 - Properties of light
 - Lenses
 - f-stop
 - Types of cameras
 - Enlargers and enlarging
 - Filters and their use
 - Camera use and practice

Unit III. and IV. — Printing and Reproducing Processes

1. Composition and Design
 - Preparation of art work for lithography
2. Material Processes
 - Preparation of photographic masters
 - Production of transparencies
 - Silk screen printing

GRAPHIC COMMUNICATIONS 30

Unit I. — Drafting

1. Architectural drawing
2. Machine drawing
3. Topographical
4. Pictorial
5. Tracing and printing

Unit II. — Photography

1. Applications of photography to: commercial, illustration, portraiture, press, police, industrial, nature
 - Roentgenography
 - Infra-Red
 - Process camera work
2. Darkroom controls and techniques
3. Photography as related to the offset press
4. Print finishing
5. Color photography
6. Motion picture photography

Unit III. — Printing

1. Practical application of offset work in industry
 - manufacturing
 - buying
 - distributing
 - administration and accounting
2. Running an offset press

Unit IV. — Printing (Continued)

1. Producing a complete printed project
 - set up the management and labor organizations to produce a paper.

INDUSTRIAL ARTS POWER MECHANICS 10, 20, 30

Introduction

Power mechanics is the study of the sources and transmission of power. Through the reading and activity the student will engage in as he progresses through these units of study, he will gain a concept of the meaning of work, energy and power.

Specific Objectives

1. To help the student understand and relate the many basic laws and principles of science as they apply to power technology.
2. To familiarize the student with the construction and requirements of machines which convert energy to useful work.
3. To develop problem solving skills related to machines and their operations.
4. To help students understand the use, care and control of the power machine.

POWER MECHANICS 10

Unit I. — Power Sources

1. Concepts of power

- Definition of work, energy, horsepower, torque
- Introduction to measurement of rotational power

2. Principles of operation

Two systems should be chosen for study from the ones listed below:

- (1) 4-stroke cycle gas
- (2) 2-stroke cycle gas
- (3) 4-stroke cycle diesel
- (4) 2-stroke cycle diesel
- (5) Wankel rotary engine

Each system to be analyzed and studied to isolate the principles related to:

- (a) carburetion
- (b) ignition
- (c) lubrication
- (d) cooling

3. Control and analysis

- (a) Factors of power output
 - brake mean effective pressure
 - displacement of cylinders
 - piston speed
- (b) Law of definite proportions
- (c) Limitations of piston and crankshaft type engines

4. Practical applications of power sources

Unit II. — Power Sources

1. Study of electric motors and three other sources of power not included in Unit I selected from the following:

- turbines
- jets
- rockets
- nuclear
- steam

2. The study of each system should consider

- (a) Concept of power
- (b) Principles of operation
 - carburetion
 - ignition
 - lubrication
 - cooling
- (c) Control and analysis
- (d) Applications

Unit III. — Hydraulics and Pneumatics

1. Basic Principles
 - Pascal's Law
 - Problems in area
 - Concept of pressure
 - Principles of flow and properties of fluids
2. Basic Hydraulic Circuitry
 - Single acting cylinder
 - Double acting cylinder
 - Use of valves
3. Principles of Pneumatic circuits
4. Applications of pneumatics
5. Fluidics

Unit IV. — Mechanical Transmission

1. Principles of mechanics
 - Mechanical advantage
 - Directional changes in power transmission
 - Efficiency of transmission
 - Linear measurement of power
 - Calculation of torque and power
2. Transmission of power through:
 - belts
 - chain devices
 - gears and shafts
3. Clutching Devices
 - dog
 - sliding gear
 - centrifugal
 - cone
 - single plate
 - multiple discs
4. Principles of power transmission through: shafts, cables, cams, rods, air screws, water screws, axles, wedges

POWER MECHANICS 20

Unit I. — Power Sources

1. Study two systems from the following not studied in Power Mechanics 10 :
 - (a) 4-stroke cycle gas
 - (b) 2-stroke cycle gas
 - (c) 4-stroke cycle diesel
 - (d) 2-stroke cycle diesel
 - (e) Wankel rotary engine
2. Study each system as outlined in Unit I, Power Mechanics 10.

Unit II. — Electric Power

1. Overview of the principles of electric motors and generators, A.C. and D.C.
2. Units and components of the generator and their functions — field, armature, frame, brushes
3. Principles of magnetic forces
4. Principles and characteristics of different types of motors
5. Fuel cell — operating principles, parts, merits
6. Chemical cells — primary and secondary cells
— limitations
7. Thermocouples
8. Solar Cells — principles of operation

Unit III. — Hydraulic and Pneumatics

1. Bernoulli's Theorem
2. Types of valves
3. Sealing devices
4. Accumulators
5. Motors
6. Pumps
7. Methods of flow control
8. Laws of gases

Unit IV. — Electrical Transmission

1. Concepts of the interrelationships between mechanical and electrical power
2. Transformer action
3. Power loss in lines
4. Principles and operation of: thermostats, humidistats, barostats, and hydrostats

POWER MECHANICS 30**Unit I. and II. — Power Sources**

1. Students to make a study in depth of two power source systems of their choice.

Units III and IV. — Power Transmission

2. Students to make a study in depth of two transmission systems chosen from the following:
 - Hydraulics
 - Pneumatics
 - Electrical transmission
 - Mechanical

MATHEMATICS

Objectives

While the academic, vocational and commercial sequences of courses have different specific objectives, the common general purposes of senior high school mathematics courses are as follows:

1. To develop an understanding of mathematics as a creation of man and to develop an appreciation of the contribution of this discipline to the progress of civilization.
2. To develop precision in thought and expression.
3. To develop and maintain an understanding of the operations and concepts of mathematics.
4. To develop and maintain skill in mathematical operations.
5. To develop powers of logical analysis of problems and of presenting their solution in a clear and precise manner.

Mathematics 10, 20, 30, 31

This sequence of courses is designed for students in the academic pattern. The content is such that successful students may enter the university or a technical institute. These courses also contribute to general education.

MATHEMATICS 10

Text

MacLean, Mumord, Bock, Hazell & Kaye, *Secondary School Mathematics, Grade Ten*.

Course Content

NOTE: Sections of the text listed as supplementary are not included in the minimum course.

Algebra

1. Rational Numbers, Irrational Numbers, Real Numbers (Chapter 1)
2. Equations and Inequations (Chapter 2)
3. Problem Solving (Chapter 3)
4. Factoring Polynomials (Chapter 4)
5. Simplification of Rational Expressions (Chapter 5)
6. Relations (Chapter 6)
7. Systems of Linear Equations (Chapter 7)

Geometry

Introduction, General Principles, Fundamental Constructions, and Inductive Reasoning (Review C & D).

1. Introduction to Deductive Reasoning (Chapter 8)
2. Fundamental Angle Pair Theorems (Chapter 9)
3. Congruence (Chapter 10)
4. Converse Statements, Converse Theorems (Chapter 11)
5. Indirect Proof, Inequations (Chapter 12)
6. Parallel Lines (Chapter 13)
7. Areas of Polygons (Chapter 14)
8. Ratio and Proportion, Similar Figures (Chapter 15)

NOTE: Teachers are advised to consult the 1965 Curriculum Guide for Mathematics 10 for suggestive treatment of Chapters 14 and 15.

MATHEMATICS 15**Recommended Text**

Kinney et al., *General Mathematics*, A Problem Solving Approach, Book I, Canadian Edition, Holt, Rinehart and Winston.

Objectives

1. To extend the student's knowledge of mathematical operations and his ability to apply these operations.
2. To revitalize interest in mathematics through successful experiences at the student's level of understanding and through the use of novel approaches.
3. To develop an appreciation of mathematics as a living, growing and changing area of work.

Course Outline

The following topics should be considered as a suggested list only. **Teachers should feel free to modify the program to suit the needs and interests of their students.** Such modification may include the deletion and/or addition of certain topics. In cases where students will follow the Mathematics 15, 25 sequence, attention should be given to those topics of Mathematics 15 which are considered as desirable preparation for Mathematics 25. Not all topics listed are treated in the recommended text. Teachers should consult the Curriculum Guide for resource materials.

A. Numeration Systems**B. Basic Algebra**

1. Natural numbers, integers, fractions and rational numbers
2. Ratio and proportion
3. Equations
4. Problem solving through equations

C. Geometry

1. Measurement
2. Similarity
3. Congruence

D. Probability**E. Business Mathematics**

1. Interest
2. Commission
3. Profit and loss
4. Banking services
5. Insurance
6. Payroll

F. Statistics — presentation and interpretation of data.

MATHEMATICS 20

Text

Beesack, Maclean, Mumford, Alexander, Bates, *Secondary School Mathematics, Grade Eleven*, (Alberta Edition), Copp Clark, 1966.

Teachers' References

MacLean et al., *Secondary School Mathematics, Grade Ten*.

Dolciani et al., *Modern Algebra and Trigonometry, Book 2*.

Elliot et al., *Senior Mathematics 2*.

Course Content

NOTE: All sections listed as supplementary are to be omitted from the minimum course. In addition, other sections as indicated are to be omitted.

1. Introduction
2. Real Numbers, Equations and Inequations (Chapter 1)
3. Exponents, Square Roots, Radicals, etc. (Chapter 2)
4. Introduction to Binary Relations (Chapter 3)
5. Relations, Functions (Chapter 4)
6. The Linear Function and Its Applications (Chapter 5)
7. Systems of Linear Equations (Chapter 6)
8. Exponents: The Exponential Function (Chapter 7)
9. Logarithmic Functions (Chapter 8)
Sections 1 - 9 inclusive (omit Sec. 10 - 21)
10. The Quadratic Function and Its Applications (Chapter 9)
(omit Section 15)
11. Introduction to the Theory of Quadratic Equations (Chapter 10)
12. The Circle (Chapter 11)
Sections 1 - 9 inclusive (omit Sec. 10 - 22)
13. Trigonometry (Chapter 12)
Sections 12.1 to 12.12 inclusive

MATHEMATICS 25**Recommended Text**

Kinney et al, *General Mathematics, A Problem Solving Approach*, Book 2, Canadian Edition, Rolt, Rinehart and Winston.

Objectives

1. To extend the student's knowledge of mathematical operations and his ability to apply these operations.
2. To revitalize interest in mathematics through successful experiences at the student's level of understanding and through the use of novel approaches.
3. To develop an appreciation of mathematics as a living, growing and changing area of work.

Course Outline

The following topics should be considered as a suggested list only. **Teachers should feel free to modify the program to suit the needs and interests of their students.** Such modification may include the deletion and/or addition of certain topics. Not all topics listed are treated in the recommended text.

A. Basic Algebra

1. Equations (two variables)
2. Graphs (two variables)
3. Square roots (tables)
4. Problem solving
5. Exponents

B. Geometry and Trigonometry

1. Symmetry
2. Right triangle and Pythagorean relation
3. Space
4. Trigonometric ratios

C. Management of Personal Property

1. Stocks, bonds and investments
2. Automobile
3. Real estate
4. Taxation
5. Consumer credit

D. Application of mathematics principles to

1. Construction
2. Sheet Metal
3. Electricity
4. Food Preparation
5. Machine Shop

MATHEMATICS 30**Text**

MacLean et al., *Secondary School Mathematics, Grade Twelve*, Edition 2.

Teachers' References

1. Elliot, Fryer, Gardner, Hill, *Algebraic Structures and Probability*, Holt, Rinehart & Winston.
2. Elliot, Fryer, Gardner, Hill, *Functions, Relations, and Transformations*, Holt, Rinehart & Winston.
3. Mosteller, Rourke, Thomas, *Probability and Statistics*, Addison-Wesley.

Course Content

1. Basic Language of Mathematics
2. Real Numbers, Real Functions (Chapter 1)
3. Sequences and Series and Mathematical Induction (Chapter 3)
(omitting Section 3.14)
4. Complex Numbers (omitting Sec. 4.14-4.20) (Chapter 4)
5. Quadratic Relations (Chapter 5)
6. Sets, Arrangements and Selections — Binominal Theorem (Chapter 6)
7. Introduction to Probability (Chapter 7)
8. Random Variables and Descriptive Statistics (Chapter 8)
(omitting Section 8.15)

NOTE: The topic Random Variables and Descriptive Statistics is optional for an interim period. The material from this chapter will not be included on the Departmental Examination.

MATHEMATICS 11**Text**

Lund, *Canadian Business Mathematics*.

Course Content

1. Addition and Subtraction (Chapter 1)
2. Multiplication and Division (Chapter 2)
3. Common Fractions (Chapter 3)
4. Graphs (Chapter 4)
5. Algebra and Its Allies (Chapter 5)
6. Ratio and Percentage (Chapter 6)
7. Mensuration (Chapter 7)
8. Profit and Loss (Chapter 8)
9. Invoices, Cash and Trade Discounts (Chapter 9)
10. Buying and Selling on Commission and Storage (Chapter 10)
11. Payrolls (Chapter 11)
12. Interest and Discount (Chapter 12)
13. Money and Banking (Chapter 13)

MATHEMATICS 21**Text**

Lund, *Canadian Business Mathematics, Book 2*.

Course Content

1. Business Algebra (Chapter 1)
2. Simple Interest and Discount (Chapter 2)
3. Compound Interest and Discount (Chapter 3)
4. Investing in Stocks and Bonds (Chapter 4)
5. Borrowing Money From a Bank (Chapter 5)
6. Instalment Buying and Selling (Chapter 6)
7. Purchase and Sale of Real Estate (Chapter 7)
8. Foreign Exchange (Chapter 8)
9. Income Tax (Chapter 9)

- | | |
|---|--------------|
| 10. Taxation | (Chapter 10) |
| 11. Life Insurance | (Chapter 11) |
| 12. Fire and Automobile Insurance | (Chapter 12) |
| 13. The Metric System | (Chapter 13) |
| 14. The Binary System and Computers | (Chapter 14) |
| 15. Classification and Sampling of Statistics | (Chapter 15) |

MATHEMATICS 31

NOTE: Mathematics 31 is made up of two parts — 1) Trigonometry AND 2) Calculus OR Vectors and Matrices. It is expected that students will spend half the time devoted to this course studying Trigonometry and the remainder of the time to either of the other two parts.

Trigonometry

Text

Welchons, A. M. and W. R. Krickenberger, *Trigonometry with Tables*, Ginn and Company.

Knott's Four-Figure Mathematical Tables.

Teacher's References

Solutions Book to Trigonometry with Tables.

Wooton, W., R. F. Beckenback and M. P. Dolciani, *Modern Trigonometry*, Houghton Mifflin Company.

Hooper, A., Alice Griswold, *Modern Course in Trigonometry*, Holt, Rinehart and Winston, Inc.

Course Content

- | | |
|---|--------------------|
| 1. Trigonometric Functions of Any Angle | (Chapter 5) |
| 2. Functions of Acute Angles | (Chapters 1 and 4) |
| 3. Radian Measure | (Chapter 6) |
| 4. Graphs of Functions | (Chapter 7) |
| 5. Fundamental Relations | (Chapter 8) |
| 6. Functions of Two Angles | (Chapter 9) |
| 7. Oblique Triangles | (Chapter 10) |
| 8. Inverse Functions | (Chapter 11) |

NOTE: Teachers are strongly advised to consult the Curriculum Guide for Mathematics 31, 1968, regarding suggested omissions from the material found in the recommended text. Some omissions are mandatory if the topics noted above are to be treated in the time available.

Calculus

Text

Elliott, H. A., K. D. Fryer, J. C. Gardner and H. J. Hill, *Calculus*, Holt, Rinehart and Winston Inc.

Teachers' References

Elliott et al., *Solutions for Calculus*

Lang, S., *Calculus*, Addison-Wesley

Course Content

- | | |
|--|-------------|
| 1. Slopes and Tangents | (Chapter 1) |
| 2. Distance, Velocity and Acceleration | (Chapter 2) |
| 3. Maxima and Minima | (Chapter 3) |
| 4. Sequences, Limits and Derivatives | (Chapter 4) |
| 5. Derivatives of Functions | (Chapter 5) |
| 6. Tangents, Derivatives and Graphs | (Chapter 6) |
| 7. Further Applications of Derivatives | (Chapter 7) |
| 8. Solutions of $D_x y = f(x)$ | (Chapter 8) |
| 9. Areas | (Chapter 9) |

Vectors and Matrices

Text

Elliott, H. A. et al., *Vectors and Matrices*, Holt, Rinehart and Winston, Inc., 1967.

Teachers' References

Elliott et al., *Solutions to Vectors and Matrices*

Davies, Philip J., *The Mathematics of Matrices*, Blaisdell Publishing Company, 1965.

Course Content

- | | |
|--|-------------|
| 1. Vectors | (Chapter 1) |
| 2. Algebraic Vectors | (Chapter 2) |
| 3. Length and Inner Product | (Chapter 3) |
| 4. Systems of Linear Equations | (Chapter 6) |
| 5. Matrices and Linear Transformations | (Chapter 7) |

MATHEMATICS 12

Text

Brown, Bridge and Morrison, *Mathematics in Practice*, Revised Edition.

Course Content

- | | |
|---|-------------------------|
| 1. Introduction to Geometry | (Chapter 1) |
| 2. Geometric Constructions | (Chapter 2) |
| 3. Integral Measures | (Chapter 3) |
| 4. Fractional Measures | (Chapter 4) |
| 5. Measurement of Distance | (Chapter 6) |
| 6. Measurement of Area | (Chapter 7) |
| 7. Measurement of Volume | (Chapter 8) |
| 8. General Number | (Chapter 9) |
| 9. Signed Numbers | (Chapter 10) |
| 10. Operations with Signed Numbers | (Chapter 11) |
| 11. Equations | (Chapter 12) |
| 12. Operations with Algebraic Expressions | (Chapter 13) |
| 13. Factoring | (Chapter 14) |
| 14. Equations, Formulas and Problems | (Chapter 15) |
| 15. Graphs and Simultaneous Equations | (Chapter 16) |
| 16. Geometrical Constructions and Relationships | (Chapter 19) |
| 17. Mensuration of Triangles | (Chapter 20) (optional) |
| 18. The Cone, Pyramid and Sphere | (Chapter 21) (optional) |
| 19. Trigonometry | (Chapter 22) |

MATHEMATICS 22

Text

Heywood, *Senior Technical Mathematics*.

Course Content

- | | |
|---|-------------|
| 1. Fundamental Operations | (Chapter 1) |
| 2. Equations | (Chapter 2) |
| 3. Factoring | (Chapter 3) |
| <i>Omit:</i> factoring by "Incomplete Square" (page 44) and "Sum and Difference of Cubes" (page 47) | |
| 4. Ratio and Proportion, Variation | (Chapter 4) |

Theory

1. To develop familiarity with time, that is, with all forms of duple and triple measurement of accent in music.
2. To develop familiarity with the *elements* of harmony (intervals and triads) at the piano, from the staff, and “by ear”.
3. To develop familiarity with melodic patterns (phrases, sentences) and simple binary and ternary forms.
4. To develop ability to read simple melodies at sight.

MUSIC 10 and 11

Primary References

Fiske, *Listening To Music*.
Pitts et al, *Music Makers*.

Course Content

1. Choral, Instrumental or Band
Performance
Literature
Theory

MUSIC 20 and 21

Primary References

Pitts et al, *Music Makers*.
Fiske, *Listening To Music*.

1. Choral, Instrumental or Band
Performance
Literature
Theory

MUSIC 30 AND 31

Primary References: As for Music 20

1. Choral, Instrumental or Band
Performance
Literature
Theory

OCCUPATIONS 10

References

Clarke and Woodsworth, *Youth and the Modern World of Work.*
Job Monographs and Occupational Outlines.

Objectives

1. To relate satisfactory work habits formed in school to possible success on the job.
2. To focus attention on the importance of desirable attitudes toward the world of work.
3. To encourage an awareness by the student of the changing nature of employment and its possible relationship to him.
4. To encourage each student to select a vocational area related to his abilities and interest.
5. To provide an opportunity for group guidance in the classroom.

Course Content

Unit I. — Adequate Preparation

- A. — Educational and vocational planning
 1. Types of planning.
 2. Significance of course choice.
- B. — The importance of an education
 1. The cost of quitting school.
 2. The reasons people drop out of school.
 3. The experiences the drop-out encounters.
 4. What the high school graduate brings to employment.

Unit II. — Occupational Exploration

- A. — Occupations ahead
 1. Survey of the occupational field.
 2. The Canadian occupational picture.
- B. — Classifications of occupations
 1. Dominion Bureau of Statistics Classification.
 2. Other classifications.
 3. Demand occupations.
- C. — Investigation of a particular occupation
 1. Need for occupational surveys.
 2. Basic outline for the study of an occupation.

D. — Investigation of an industry

1. Influence of the industrial picture on career planning.
2. Adaptability essential in industrial change.

Unit III. — Opportunities for Training

A. — Kinds of training

1. University.
2. Institutes of Technology.
3. Vocational Programs.
4. Apprenticeship.
5. Agricultural and Vocational Colleges.
6. Business Colleges.
7. Schools of Nursing.

B. — Financial assistance for training

1. Students Assistance Act.
2. Scholarships.
3. Armed Services.
4. Subsidized Apprenticeship.
5. Allowances.

Unit IV. — The Individual and the Job

A. — Analysis of interests and abilities

1. Interest and the job.
2. Abilities and the job.

B. — Relationship of social and emotional characteristics to the job

1. Social characteristics.
2. Personal characteristics and the job.

C. — Safety and the individual

1. The accident problem.
2. The cost of accidents.
3. Accident prevention responsibility.
4. Cause of accidents.
5. The role of training in accident prevention.
6. Preventive program.

D. — Alcohol and the job

1. Historical background.
2. Reasons for drinking.
3. Effects in industry and the professions.
4. Effects upon individuals.
5. Rehabilitation.

PHYSICAL EDUCATION

Physical education is concerned with development of the whole individual. As well as contributing to the mental, social and emotional well-being of youth, a claim all subjects make, physical education has its unique contribution in developing physical fitness and motor skills in recreational activities which can carry over into adult life.

Every physical education program must motivate the student to engage in activities which develop physical fitness as well as those that are recreational in nature. The program must be challenging and also allow for personal achievement at the various levels of participation. Individual differences, needs and desires must be taken into account in order to provide enjoyment and self-satisfaction.

Objectives of Physical Education

1. The development of a strong body and sound functioning of body systems.
2. The development of recreational and utilitarian skills.
3. The development of a wholesome interest in physical activities for wise and constructive use of leisure time.
4. The development of desirable standards of behaviour and the ability to get along well with other people.

PROGRAM ORGANIZATION

There are many activities from which a physical education program may be chosen. In order to insure that a well-balanced program is carried out, however, three principles have been established.

First, the program from Grade VII through Grade X is sequential and there should be a continuous progression in skills from basic to complex. The student should also experience a variety of activities. Therefore the program should be carefully planned with this end in view. It is particularly important that the program in Senior High School be planned with a knowledge of what the student's program has been in the Junior High School.

Second, six major kinds of activities are considered to be of importance in the physical education program. These are designated as core activities. Each of the six categories of activity either is in itself a core activity or includes core activities. The core activities are :

1. Outdoor:— Flag Football, Ice Hockey, Softball, Soccer, Field Hockey.
2. Indoor:— Basketball, Volleyball.
3. Dual and Individual:— Badminton, Cross-Country Running, Handball, Skating, Track and Field, Wrestling (boys).
4. Rhythmics and Dance.
5. Tumbling and Gymnastics.
6. Aquatics (where facilities are available).

Applying the principles stated above, therefore, a sound physical education program for any one year will be organized as follows:

1. Two or more outdoor team games at least one of which must be a core activity.
2. Two or more indoor team games at least one of which must be a core activity.
3. Two or more individual or dual sports one of which must be a core activity.
4. Tumbling and Gymnastics.
5. Rhythmics and Dance.
6. Aquatics (where facilities are available).

PHYSICAL EDUCATION 10

Course Content

NOTE: In teaching the activities listed below the following areas will be covered:

(1) History, (2) Terminology, (3) Rules and Officiating, (4) Selection and Care of Equipment, (5) Skills and Techniques, (6) Team Play or Games strategy (where applicable), (7) Lead Up Games and Games Variations, (8) Conditioning. Some of these areas will be incidentally taught while others will be taught directly.

Activities not included in the list may be taught with the approval of the superintendent of schools.

OUTDOOR TEAM GAMES

A. — Flag Football (Core)

1. Skills and Techniques

- (a) Stance of linemen and backfield.
- (b) Pulling of linemen.
- (c) Blocking— shoulder, brush, kick-off protection, pass protection.
- (d) Passing and receiving— throwing, catching, cutting, pass patterns, pass defence.
- (e) Central exchanges— the “T”, single wing, punting, field goals, leading.
- (f) Kicking and receiving— punting, field goals, receiving a punt or a kick-off.

2. Team Play

- (a) Offensive Plays— quick opening, off tackle, end run, reverse and double reverse, counter, pass plays.
- (b) Defensive Plays— individual responsibilities, side-line defence, rushing, rotating, stunting, looping, floating.

B. — Ice Hockey (Core)

Skills and Techniques

- (a) Skating— starts, stops, backwards, forwards, turns, reverses.
- (b) Shooting— forehand, backhand, slap.
- (c) Passing.
- (d) Checking— poke, shoulder, hip, fore, back, blocking shots.
- (e) Goal tending.

2. Team Play

Power play, penalty killing, offensive and defensive positional plays, plays initiated inside the blue line.

C. — Softball (Core)

1. Skills and Techniques

- (a) Throwing— underhand, overhand, sidearm.
- (b) Fielding— ground balls, fly balls.
- (c) Batting— stance, saving, punting.
- (d) Base running.
- (e) Positional Play— catcher, pitcher, basemen, shortstop, outfielders.

2. Team Play

- (a) At Bat.
- (b) In the Field.

D. — Soccer (Core)

Skills and Techniques

- (a) Passing, receiving, dribbling, heading.
- (b) Trapping— foot, shin, body.
- (c) Kicking (stationary and moving)— volleying, charging, tackling, throwing, goalkeeping.

E. — Bordenball

Skills and Techniques — passing, shooting.

F. — Broomball

Skills and Techniques — basic skating skills, goal tending, use of broom.

G. — Curling

Skills and Techniques

Delivery (in-turn, out-turn, weight); sweeping, skipping.

H. — English Rugby

Skills and Techniques

- (a) Running— swerve, sidestep, change of pace, hand-off, selling.
- (b) Ball Skills— passing, punting, catching, drop kicking, place kicking, dribbling, falling the ball.
- (c) Fielding and tackling.
- (d) Scrum Play— set scrum, loose scrum, line out, wheeling, positional play.
- (e) Back Play— alignment, scrum half, break through, offensive kicking, (short kick, grubber kick, cross kick) reverse play, scissors pass, blind side pass.

I. — Field Ball

Passing, Shooting.

J. — Field Hockey (Core)

Skills and Techniques

- (a) Passing, receiving, dribbling, fielding, tackling.
- (b) Individual defence, bully, corner, roll-in.
- (c) Goal tending.

K. — Speedball

Skills and Techniques

Dribbling, passing, place and drop kicking, punting, pickups.

INDOOR TEAM GAMES

A. — Basketball (Core)

1. Skills and Techniques

- (a) Basic Stance— offence and defence.
- (b) Footwork— running forward and backward, pivoting, one-two count.
- (c) Passing, Pass-Receiving— two-hand chest, one-hand push, bounce, overhead, hook, baseball, underhand.
- (d) Shooting— two-hand set, layup, hook, jump, running one hand, foul shooting.
- (e) Dribbling— high, low.

2. Team Play

- (a) Man-to-man and zone defences.
- (b) Screening, overloading, fast break.

B. — Volleyball (Core)

1. Skills and Techniques

- (a) Volleying— position, back court volleying, setting, below the chest.
- (b) Serving— underhand, overhand, assisted, arm and hand action.
- (c) Spiking— approach, placing, back court spiking, arm and hand action.
- (d) Blocking— the jump, recovering the ball off the net.

2. Team Play

- (a) Offence— 1, 2, 3 (volley, set, spike), rotation of the setter, the fake spike.
- (b) Defence— double team blocking, team movement for spikes and tips, team movement when there is no spike.

C. — Floor Hockey

With the exception of skating, same skills as ice hockey.

D. — European Handball

Skills and Techniques

Dribbling, shooting, passing, defensive fundamentals.

DUAL AND INDIVIDUAL SPORTS

A. — Badminton (Core)

Skills and Techniques

- (a) Serves.
- (b) Forehand and backhand.
- (c) Clear, drive, drop, smash, net, round the head.
- (d) Doubles systems of play.

B. — Cross Country Running (Core)

Running style, conditioning, pacing, strategy.

C. — Handball (Core)

Skills and Techniques

Serve, volley, half-volley, lob, killshots, back-wall and ceiling shots, doubles systems of play.

D. — Skating (Core)

Skills and Techniques

Skating forward, backward; stops, turns, starts; figure 3, figure 8, spiral; elementary individual and pair routines.

E. — Track and Field (Core)

Skills and Techniques

- (a) Sprints— starts, running stride, the finish.
- (b) Relays— baton exchange, types of relay.
- (c) Middle Distance— running stride, hand, arm, leg and foot action, the finish.
- (d) Broad Jump— approach, take-off, the jump, landing.
- (e) High Jump— approach, take-off, kick (western, eastern, belly roll), landing.

- (f) Hurdles— movement of leading and trailing leg, steps between hurdles, the start, approaching first hurdle, the finish.
- (g) Shot Put— hand-hold, delivery, release, movement across the circle, recovery.
- (h) Discus— hand-hold, initial stance, preliminary swings, delivery, movements across the circle, release, recovery.
- (i) Pole Vault— hand-hold, pole carry, approach, swing up, pull up, body form, landing.
- (j) Hop, Step and Jump — approach, take-off, the hop-step-jump rhythm, landing.

F. — Wrestling (Core)

Skills and Techniques

- (a) Stance— on the feet, on the mat, closed stance.
- (b) Breakdowns— near arm and far ankle, head lever and far ankle, far arm and far ankle.
- (c) Riding the opponent.
- (d) Reverses and Escapes— defensive positions on the mat, wing lock or side roll, escape from underneath, hip-lock escape, hip-lock escape with cross face.
- (e) Pinning Holds— near wrist and half-nelson, hammerlock and half-nelson, crotch and half-nelson, outside crotch and near wristlock.

G. — Archery

Skills and Techniques

Stringing the bow, basic stance and position, nocking, holding, drawing and aiming, loosing, novelty shots.

H. — Bowling

Skills and Techniques

Grip, footwork, release, speed and rhythm, point of aim.

Types of Delivery— straight, hook, back up.

Types of Shots— strikes, spares, splits.

I. — Golf

Skills and Techniques

Grip, stance, swing, wood shots, irons, putting, selection of clubs.

J. — Hiking and Campercraft

1. Skills and Techniques

- (a) Campercraft: — fire building and safety, outdoor cooking, menu planning, cooking kits and food packing.
- (b) Knotcraft: — rope whipping, reef knot, bowline, clove hitch, use of knots, use of lashing ropes.
- (c) Direction finding: — sun, watch, stars, compass.

2. Campsite and Equipment

- (a) Types of camp: — resident family, dual and individual campsites and shelters.
- (b) Camp facilities and resources, public lands and parks.

3. Camping Activities

- (a) Campfire activities: — stories, skits, songs, games.
- (b) Other — canoeing, swimming, casting, fishing, archery, hiking, ice-fishing.
- (c) Nature study: — birds, leaves, rocks, insects, trees, animals, fish.

K. — Horseshoes

Skills and Techniques

Grip, turns, stance, step and swing release.

L. — Personal Defence

Judo, ju-jitsu, boxing.

NOTE: These sports should be offered only by teachers skilled in the activity and where facilities and equipment ensure the safety of the students participating.

M. — Skiing

Skills and Techniques

- (a) On the level: — gliding, step, skating, step turn, kick turn.
- (b) Climbing: — side step, herring bone, traverse.
- (c) Downhill: — straight turn, traverse stopping, side slipping, other turns.

N. — Table Tennis

Skills and Techniques

- (a) Basic stance, grip, service, spins.
- (b) Defensive strokes: — the half volley, the chop.
- (c) Offensive strokes: — the drive, the drop shot.
- (d) Doubles systems of play.

O. — Tennis

Skills and Techniques

Grip, stance, footwork, forehand and backhand drives, service, lob, volley, half volley, smash, doubles systems of play.

RHYTHMICS AND DANCE (Core)

A. — Dance

1. **Folk Dance:**
basic steps, fundamental and derived.
2. **Square Dance:** — patter and singing calls, single and double visiting couple, accumulative figures.
3. **Social and Ballroom Dance:** — basic steps in waltz, foxtrot, tango, rumba, samba, current dance steps, dance patterns.
4. **Creative or Modern Dance:**
 - (a) Moving in and through space: — locomotor and axial movement, space design, group design, floor pattern, qualities of movement.
 - (b) Dance techniques: — creative activities, improvisations, abstracts, response to stimuli.
 - (c) Composition principles: — units, variety, repetition, contrast, balance, harmony.
5. **Tap Dance:** — basic steps, combinations, routines.
6. **Ballet.**

TUMBLING AND GYMNASTICS (Core)

A. — Tumbling

Forward roll, backward roll, shoulder roll, dive roll, three-man shuffle, double roll, jump through, nip up, chest roll, fish flop, head spring, neck spring, hand spring (bent and straight arm), round off cartwheel.

Trampoline

- (a) Rebounding form — basic form, tuck, pike, jack knife.
- (b) Drops — check drop, knee, hand and knee, seat, front and back.
- (c) Advanced stunts — somersaults, twists, dives and back over.

B. — Free Exercise

C. — Balances

Squat, hand and head, forearm, snapdown.

D. — Double Balances

Foot to hand, thigh stand, knee stand, walk-up shoulder mount, low arm to arm, assisted somersault.

E. — Pyramid Building

F. — Horizontal Bar (Boys)

Chins, skin-the-cat, monkey hangs, belly grind, front hip circle, short underswing and dismount, low underswing with half turns at end, single knee dismount, single knee mount from swing, single knee circle backward, double knee circle forward, single knee circle forward.

G. — Vaulting Box

1. Sideways: — squat vault mount, jump off forward (with pike), straddle vault, squat vault, side or flank vault, front vault, stoop vault, dive over box with forward roll, neckspring, headspring, handspring.
2. Lengthways (boys): — squat vault mount, kneeling vault, straddle vault mount, side vault, scissors vault with half turn, forward roll, neckspring, headspring, handspring.

H. — Parallel Bars (Boys)

1. Mounts: — Single leg cut on, double leg cut on, lazy man kip, inverted hang to straddle.
2. Dismounts: — single leg cut off, double leg cut off, front dismount to side, rear dismount to side.
3. Stunts: — jump to cross rest position, jump to cross upper hang, swing from shoulders, stationary and swinging dips, hand walk forward, crab walk on bars, straddle progression, swing through and sit, forward roll to straddle, forward roll, shoulder balance, roll forward from shoulder, roll backward from straddle, kick up-start, front uprise, back uprise, upper arm kip, handstand.

I. — Uneven Parallels (Girls)

1. Mount: — front support mount, backpull over, hang to straddle, pike or swing legs over, knee circle mount.
2. Dismount: — handstand $\frac{1}{4}$ turn, underswing high bar, straddle sole-circle.
3. Movements on the bars: —
 - (a) Hanging and swinging — underswing high bar $\frac{1}{4}$ turn, skin-the-cat cartwheel, cast off high bar.
 - (b) Circling the bar — knee circle, hip circle, seat circle.
 - (c) From bar to bar — stem rise, single leg kick-over, eagle regrasp.

J. — Rings (Boys)

Chins or bent-arm hang, inverted hand, swing, basket, single leg cut, inlocate, dislocate.

K. — Balance Beam (Girls)

1. Mounts: — straddle over to sit, squat mount, fence vault.
2. Dismounts: — pike jump, English hand balance, cartwheel.
3. Locomotor movements: — runs, hops, jumps.
4. Balances: — front scale, knee scale, lunge.
5. Tumbling stunts: — front roll, back roll.

AQUATICS (Core)

A. — Swimming

1. Adjustment to the water, drownproof techniques.
2. Strokes — front crawl, back crawl, elementary back stroke, side stroke, breast stroke, hybrid strokes.
3. Floating, treading water and sculling.
4. Diving.
5. Life saving (for advanced swimmers).
6. Water games.

B. — Synchronized Swimming

1. Sculling — flat scull, head first, feet first, circle propeller.
2. Back entries — back tuck somersault, back dolphin, kip, flying back dolphin.
3. Forward entries — front tuck somersault, front pike, somersault, bent knee front, tuck somersault, porpoise.
4. Ballet leg figures.
5. Strokes.
6. Floating — back layout, tub, log roll, marlin, waterwheel, shark.
7. Individual and group routines and patterns to music.

C. — Water Safety

PHYSICAL EDUCATION 20

The general objectives of physical education will remain the same for Physical Education 20 as for all other physical education programs: that is the program should provide for the attainment of physical, social, emotional, and intellectual objectives. Opportunity should be provided for the development of strength, agility, speed, vitality, and general physical fitness, as well as participation in, and the enjoyment of, a variety of physical activities. In addition, through certain activities it is possible to create an atmosphere of co-operation and fair play and to develop self-expression, poise, and creativity.

It is desirable for all students to take Physical Education 20 and it should be available to all students, regardless of program.

Specific objectives for any particular Physical Education 20 program should reflect the specific interests, needs, and abilities of the student group. Any given program might emphasize one or more of the following plans:

- (1) Continue a basic sequential program initiated at the Grade Seven level.

As more students are encouraged to take Physical Education 20, the greater is the need for a coordinated program through Physical Education 10 and 20. Physical Education 20 should not be merely a duplication of Physical Education 10.

(2) Stress individual and dual sports. When adjusting the program to meet the needs of a student group approaching graduation, an increased stress on leisure-time activities with definite carry-over value should be made. With the ever increasing need for instruction in the wise use of leisure time such a program is vital, including such activities as tennis, badminton, swimming, camping, boating, and curling, as well as the promotion of co-educational activities.

(3) Develop student leadership techniques. Physical Education 20 students should provide leadership in the intramural and class programs within the school, and ideally, be prepared to serve the community.

A combination of these various approaches will in all probability best serve the needs and interests of most physical education classes and in so doing present a challenging, enjoyable, and balanced program.

PHYSICAL EDUCATION 30

The program for Physical Education 30 should be designed with emphasis upon individual and dual sports. It should concentrate on those activities that can be enjoyed throughout life, stressing purposeful use of one's leisure time.

The activities which are taught will depend upon the facilities and equipment available, however utilization of facilities outside the school will provide for curriculum enrichment.

Core: Outdoor Education Fitness, First Aid.

Electives. A minimum of four should be chosen from the following list. Archery, aquatics, badminton, bowling, curling, dance, fencing, golf, gymnastics, handball, judo, orienteering, (figure) skating, skiing, tennis, track and field, other individual or dual sports and leadership and organization experiences.

PSYCHOLOGY 20

(Based on *Psychology For Living* by Sorenson and Malm)

The objective of this course is not primarily the mastery of a given body of subject matter. Rather, its purpose is to bring to the student's attention a scientific approach to the study of human behavior so that he may appreciate more fully the reasons that underlie his own acts and those of his fellows.

Compulsory Units

Unit 1 — Personality

Unit 2 — Mental and Emotional Health

Optional Units (Three out of five to be chosen)

Unit 3 — Physical Growth and Behavior

Unit 4 — Effective Learning

Unit 5 — Intelligence and Thinking

Unit 6 — Courtship and Marriage

Unit 7 — Planning a Career

Text

Sorenson and Malm: *Psychology For Living*

Course Content

Introduction to the Course

- (a) A Definition of Psychology
- (b) A Brief History of Psychology
- (c) The Methods of Psychology
- (d) Other Fields of Study in Which There Is a Similarity Either of Name or of Subject Matter

COMPULSORY UNITS

Unit 1 — Personality

Objective

The objective of this unit is to develop in the student an understanding of the concept of personality.

Course Content

- (a) Sources and Growth of Personality
- (b) Getting Along with Other People
- (c) Habits
- (d) Needs

Unit 2 — Mental and Emotional Health

Objective

The objective of this unit is to develop in the student an understanding of the implications of mental and emotional health on human behavior.

Course Content

- (a) Emotion
- (b) Methods of Defence and Escape
- (c) Feelings, Concepts, and Attitudes
- (d) Anger and Fear

OPTIONAL UNITS

Unit 3 — Physical Growth and Behavior

Objectives

The objective of this unit is to develop an understanding of the physical bases of behavior.

- (a) Structures for Objective Awareness and Response
- (b) Physical Growth
- (c) The Effect of Physical Development on Personality

Unit 4 — Effective Learning (Chapters 15 - 18, *Sorenson and Malm*)

Objective

The objective of this unit is to develop an understanding of the learning process and the psychological principles underlying effective study habits.

- (a) Success in School and as an Adult
- (b) How to Study
- (c) How we Learn
- (d) Memory

Unit 5 — Intelligence and Thinking (Chapters 19 - 21)

Objective

The objective of this unit is to develop in the student an understanding of the nature of intelligence and its relationship to thinking.

- (a) Definitions of Intelligence
- (b) The Distribution of Human Intelligence
- (c) Intelligence and Levels of Thought
- (d) Cultivation of Clear Thinking

Unit 6 — Courtship and Marriage

Objective

The objective of this unit is to develop an understanding of the behavior factors which lead to wholesome and intelligent relations between the sexes.

NOTE: This unit should be offered in schools where the administration has expressly authorized it.

- (a) Getting Along With Members of the Other Sex
- (b) What Makes One Attractive to the Opposite Sex
- (c) The Importance of a Wise Marital Choice
- (d) Making a Successful Marriage

Unit 7 — Planning a Career

Objective

The objective of this unit is to develop in the student an understanding of the psychological approach to career selection.

- (a) Knowledge of Oneself
- (b) Knowing the Work
- (c) Putting (a) and (b) Together
- (d) Getting Along on the Job
- (e) Other Factors

PSYCHOLOGY 20

(Based on *Introductory Psychology* by Averill)

Reference Books

For the Student:

Averill: *Introductory Psychology*

For the Teacher:

Collins and Drever: *Psychology and Practical Life*

Strecker and Appel: *Discovering Ourselves*

Bowers: *Thinking For Yourself*

Course Content

1. Human Wants and How They are Satisfied
2. Our Habits
3. The Scientific Basis of Psychology
4. How to Study
5. Mental Attitudes
6. Paying Attention
7. How to Remember
8. Some Rules of Learning
9. Work, Fatigue and Interest
10. Our Feelings and Emotions
11. Thinking
12. Wish-Thinking and Propaganda
13. What We Do and Do Not Inherit
14. Meeting Obstacles
15. Your Vacation
16. Character and Character Building
17. Living Harmoniously
18. Personality
19. Crime and Delinquency
20. Developing a Healthy Mind

SCIENCE

CHEMISTRY 10

(There is no alternate program for this course.)

Texts

Chemistry, An Experimental Science (Chem. Study).

Laboratory Manual to Accompany Chemistry, An Experimental Science.

Course Outline

| Chapter Number | Chapter Title | Experiment Number (s) |
|----------------|--|-----------------------|
| 1 | Chemistry: An Experimental Science | 1, 2, 3, 4 and 5 |
| 2 | A Scientific Model; The Atomic Theory | 6, 7 |
| 3 | Chemical Reactions | 8 |
| 4 | The Gas Phase: Kinetic Theory | 9 |
| 5 | Liquids and Solids: Condensed Phases of Matter | 10, 11 |
| 6 | Structure of the Atom and the Periodic Table | |

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 10

(Alternative programs are available.)

Alternative I Program

Text

Stollberg, Hill and Nygaard, *Fundamentals of Physics*.

Course Outline

| Chapter Number | Chapter Title | Investigation Number (s) |
|----------------|-----------------------------------|--------------------------|
| 1 | The Science of Physics | 1 |
| | Some Mathematics Basic to Physics | |
| | Scientific Notation | |
| | Significant Digits | 2A |
| | Graphing Exp. Data | |
| | Percent Error | |
| | The Slide Rule | 3 |
| 2 | Motion and Measurement | 2B, 5 |
| 3 | Force and Motion | 6 |
| 4 | Work and Energy | 4 |

| Chapter Number | Chapter Title | Investigation Numbers |
|----------------|-----------------------------------|-----------------------|
| 5 | Force in Fluids | 7 |
| 6 | Molecules and Atoms in Motion | 9, 10 |
| 7 | Measurement of Temp. and Heat | 12 |
| 8 | Heat and Change of Physical State | 13, 14 |

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 10

ALTERNATIVE II: PHYSICS (PSSC) 1st OR 2nd EDITION

LABORATORY GUIDE FOR *PHYSICS*

Course Outline

| 1st Edition of textbook <i>Physics</i> | 2nd Edition of textbook <i>Physics</i> |
|---|---|
| <p>Part I—The Universe</p> <p>Chapter 1—What is Physics</p> <p>Chapter 2—Time and Measurement</p> <p>Chapter 3—Space and Its Measures</p> <p>Chapter 4—*Functions and Scaling</p> <p>Chapter 5—Motion Along a Path</p> <p>Chapter 7—Mass Elements and Atoms (Sec. "A" only)</p> <p>Chapter 9—The Nature of a Gas</p> <p>It is suggested that the additional topics which readily lend themselves to experimental approach be added—e.g. Pressure in Liquids; Archimede's Principle, Heat and Change of State Expansion (Linear only).</p> <p>Experiments</p> <p>Part I—1, 2, 3, 5, 12, 13, 14, 17.</p> <p>*The main purpose of Chapter 4 is to interpret experimental data. Pupils should acquire skill in :</p> <ol style="list-style-type: none"> Reading and Interpreting Graphs Constructing Graphs from Given Data Deriving Empirical Formulas from Graphs Based on Experimental Data. <p>In connection with Chapter 4, teachers are encouraged to perform other experiments which would provide essential data for graphic and algebraic interpretation.</p> <p>Students should be taught how to use a slide rule early in this course.</p> | <p>Part I—The Universe</p> <p>Chapter 1—An Introduction to Physics</p> <p>Chapter 2—Time and Measurement</p> <p>Chapter 3—Space and Its Measures</p> <p>Chapter 4—*Functions and Scaling</p> <p>Chapter 5—Motions Along a Straight Line Path</p> <p>Chapter 7—Mass and the Elements (Omit secs. 7.6-7.8)</p> <p>Chapter 9—The Nature of a Gas.</p> <p>It is suggested that the additional topics which readily lend themselves to experimental approach be added—e.g., Pressure in Liquids; Archimede's Principle, Heat and Change of State Expansion (Linear only).</p> <p>Experiments</p> <p>Part I—1, 2, 3, 5, 11, 12, 13, 16.</p> <p>*The main purpose of Chapter 4 is to interpret experimental data. Pupils should acquire skills in :</p> <ol style="list-style-type: none"> Reading and Interpreting Graphs Constructing Graphs from Given Data Deriving Empirical Formulas from Graphs Based on Experimental Data. <p>In connection with Chapter 4, teachers are encouraged to perform other experiments which would provide essential data for graphical and algebraic interpretation.</p> <p>Students should be taught how to use a slide rule early in this course.</p> |

CHEMISTRY 20

(Alternative programs available)

Alternative I Program**Text***Chemistry, An Experimental Science (CHEM Study).**Laboratory Manual to Accompany Chemistry, An Experimental Science.***Course Outline — Alternative I**

| Chapter Number | Chapter Title | Experiment Number(s) |
|----------------|------------------------------------|----------------------|
| | Review of Science 10 (CHEM. Study) | |
| 13 | Chemical Calculations | 23 |
| 14 | Why We Believe in Atoms | 24, 25, 8* |
| 15 | Electrons and the Periodic Table | 10* or 1** |
| 16 | Molecules in the Gas Phase | 11* or 2** |
| 17 | The Bonding in Solids and Liquids | 27 |

* Optional experiments from *Laboratory Investigations in Chemistry* — Davis and Allen (see Chemistry 30 Alternative I Outline).

** Optional experiments from Chapter 7, *Elements of Chemistry* — Radomsky, Kass, and Pickard (see Chemistry 20, Alternative II Outline).

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions, etc.

CHEMISTRY 20

Alternative II Program

Text

Radomsky, Kass and Pickard, *Elements of Chemistry*.

Course Outline — Alternative II

| Chapter Number | Chapter Title | Experiment Number(s) |
|----------------|---|----------------------|
| 1 | The Fundamental Particles | |
| 2 | The Structure of the Atom | 1 |
| 3 | The Periodic Classification of Elements | |
| 4 | Chemical Bonds (omit sec. c (ii) and c (iii) under molecular shape) | 2, 4 |
| 5 | Naming of Compounds | |
| 6 | Formula Weights and Volumes | 5, 6, 9 and 10 |
| 7 | Experiments on Unit I and Unit II | |
| 8 | The Chemical Equation | 1 |
| 9 | Solutions | 3, 5, 6 and 7 |
| *10 | The Alkali Metals | 8 |
| *11 | The Halogens | 9, 10 and 12 |
| 12 | Experiments on Unit III | |

* These chapters should be discussed along with chapters 1, 2 and 3.

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 20

(Alternative programs are available.)

Alternative I Program**Text**Stolberg, Hill, Nygaard, *Fundamentals of Physics*.**Course Outline — Alternative I**

| Chapter Number | Chapter Title | Investigation Number |
|----------------|---|----------------------|
| | Some Mathematics Basic to Physics (see Phys. 10) | Steps 1-8 Inv. 3 |
| 9 | Nature of Waves | * 15, * 16 |
| 10 | Sound | 17, 18 |
| 11 | The Wave Nature of Light | * 19, 20, 25 |
| 12 | Reflection of Light | * 21 |
| 13 | Refraction of Light | * 22, * 23 |
| 14 | Color | * 24 |
| 5 | Forces in Fluids | 8 |
| 15 | Frontiers of Physics | |

* P.S.S.C. equipment may be substituted if available.

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 20**ALTERNATIVE II: PHYSICS (PSSC) 1st OR 2nd EDITION****LABORATORY GUIDE FOR PHYSICS****Course Outline:**

| 1st Edition of textbook <i>Physics</i> | 2nd Edition of textbook <i>Physics</i> |
|---|--|
| Part II — Optics and Waves | Part II — Optics and Waves |
| Chapter 11—How Light Behaves | Chapter 11—How Light Behaves |
| Chapter 12—Reflection and Images | Chapter 12—Reflection and Images |
| Chapter 13—Refraction | Chapter 13—*Refraction |
| Chapter 14—Lenses | Chapter 14—The Particle Model of Light |
| Chapter 15—The Particle Model of Light | Chapter 15—Introduction to Waves |
| Chapter 16—Introduction to Waves | Chapter 16—Waves and Light |
| Chapter 17—Waves and Light | Chapter 17—Interference (Omit Section 17 - 5) |
| Chapter 18—Interference (Omit Section 18.5) | Chapter 18—Light Waves (Omit Sections 18.5 - 18.8) |
| Chapter 19—Light Waves (Omit Sections 19.5 to 19.8) | |

Experiments:

Part II — 1, 2, 3, 4, 5, 7, 8, 9, 10, 11
(Omit Experiment 11 - 6)

Teachers should consider the teaching of Sound as a natural extension of the study of waves. It is recommended that **Chapter 10** and **Investigation 18** in **Fundamentals of Physics**, Stollberg-Hill-Nygaard be studied in this course.

Experiments:

Part II — 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11,
12, 13, 16
(Omit Experiment 11 - 6)

Teachers should consider the teaching of Sound as a natural extension of the study of waves. It is recommended that **Chapter 10** and **Investigation 18** in **Fundamentals of Physics**, Stollberg-Hill-Nygaard be studied in this course.

*It is suggested that application of lenses in cameras, projectors, the eye, and simple magnifier, the compound microscope and the telescope, be studied. Good sources of information of application of lenses will be found in **Chapter 14** (Sections 14.4 - 14.7) of 1st Edition of PSSC text, and Chapter 13 of **Fundamentals of Physics**, Stollberg-Hill-Nygaard.

CHEMISTRY 30

(Alternative programs are available.)

Alternative I Program**Texts**

Sienko and Plane, *Chemistry* (Canadian Edition).

Davis and Allen, *Laboratory Investigations in Chemistry*.

Course Outline — Alternative I

| Chapter Number | Chapter Title | Experiment Number (s) |
|----------------|------------------|-----------------------|
| Part 1 | | |
| 2 | Nature of Matter | |
| 3 | Atoms | |
| 4 | Chemical Bond | |
| 5-5.7 | Stoichiometry | |
| Part II | | |
| 5.9 | Stoichiometry | 1 and 12 |
| 6 | Gases | 13 |
| 7 | Liquids | |
| 8 | Solids | 15 |
| 10 | Solutions | 2, 3 and 17 |

| Chapter Number | Chapter Title | Experiment Number(s) |
|----------------|-----------------------|----------------------|
| 12 | Chemical Kinetics | |
| 14 | Electro Chemistry | 19, 20 |
| 24 | Group IV Elements | 26, 27, 28 |
| 28 | Organic Chemistry | 25 |
| | Quantitative Analysis | 26, 27, 28 |

NOTE: The main emphasis in this program should be on Part II as outlined above.

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

CHEMISTRY 30X

Alternative II Program

Texts

Chemistry, An Experimental Science (Chem. Study).

Laboratory Manual to Accompany Chemistry, an Experimental Science.

Course Outline — Alternative II

| | | |
|----|--------------------------------------|------------|
| 7 | Energy Effects in Chemical Reactions | 12, 13 |
| 8 | The Rates of Chemical Reactions | 14 |
| 9 | Equilibrium in Chemical Reactions | 15 |
| 10 | Solubility Equilibria | 16 |
| 11 | Aqueous Acids and Bases | 17, 18, 19 |
| 12 | Oxidation — Reduction Reactions | 20, 21 |
| 18 | The Chemistry of Carbon Compounds | 28, 29 |
| 19 | The Halogens | 30, 31 |

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 30

(Alternative programs are available.)

Alternative I Program

Text

Stolberg, Hill, *Frontiers of Physics*.

Course Outline — Alternative I

| Chapter Number | Chapter Title | Investigation Numbers |
|----------------|---|-----------------------|
| | Some Basic Physics (See Physics 10 outline). | |
| 1 | Motion and Measurement | *4 |
| 2 | Force and Motion | 6, 7 |
| 3 | Work and Energy | 9 |
| 4 | Matter and Energy | 10, 11 |
| 6 | Forces in Equilibrium | 14, 15, 16 |
| 7 | Forces and Simple Machines | 17 |
| 9 | Magnetism and Electromagnetism | 21, 22 |
| 10 | Electric Energy and Electric Circuits | |
| 11 | Direct Current | 23, 24, 25 |
| 12 | Moving Charges in Magnetic Fields | 26, 27 |
| 13 | Alternating Current | |
| 16 | Particles, Accelerators and Holes | |

* P.S.S.C. equipment may be substituted if available.

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

PHYSICS 30X**Alternative II Program****Text***Physics* (P.S.S.C.)**Course Outline — Alternative II**

| Physics 30X — Using 1st Edition of Textbook, <i>Physics</i> | Physics 30X — Using 2nd Edition of Textbook, <i>Physics</i> |
|--|--|
| Part I — The Universe | Part I — The Universe |
| Review | Review |
| Chapter 2 — Time and Measure- ment | Chapter 2 — Time and Measure- ment |
| Chapter 3 — Space and Its Measurement | Chapter 3 — Space and Its Measures |
| Chapter 4 — Functions and Scaling New Work | Chapter 4 — Functions and Scaling New Work |
| Chapter 5 — Motion Along a Path | Chapter 5 — Motion Along A Straight-Line Path |
| Chapter 6 — Vectors | Chapter 6 — Motion in Space |
| Part III — Mechanics | Part III — Mechanics |
| Chapter 20 — Newton's Law of Motion | Chapter 19 — Newton's Law of Motion |
| Chapter 21 — Motion at the Earth's Surface | Chapter 20 — Motion at the Earth's Surface |
| Chapter 22 — Universal Gravitation and the Solar System | Chapter 21 — Universal Gravitation and the Solar System |
| Chapter 23 — Momentum and Conservation of Momentum | Chapter 22 — Momentum and the Conservation of Momentum |
| Chapter 24 — Work and Kinetic Energy | Chapter 23 — Work and Kinetic Energy |
| Chapter 25 — Potential Energy | Chapter 24 — Potential Energy |
| Chapter 26 — Heat, Molecular Motion, Conservation of Energy | Chapter 25 — Heat, Molecular Motion, Conservation of Energy |

| Physics 30X — Using 1st Edition of Textbook, <i>Physics</i> | Physics 30X — Using 2nd Edition of Textbook, <i>Physics</i> |
|---|--|
| Experiments: III — 2, 3, 4, 5, 6, (8), 9, 10, 11, 12, 13, 14. | Experiments: III — 1, 2, 3, 4, 5, (7), 9, 10*, 11, 12, 13. |
| Part IV — Electricity and Atomic Structure | Part IV — Electricity and Atomic Structure |
| Chapter 27 — Some Qualitative Facts About Electricity | Chapter 26 — Some Qualitative Facts About Electricity |
| Chapter 28 — Coulomb's Law and the Elementary Electric Charge | Chapter 27 — Coulomb's Law and the Elementary Electric Charge |
| Chapter 29 — Energy and Motion of Charges in Electric Fields | Chapter 28 — Energy and Motion of Charges in Electric Fields |
| Chapter 30 — The Magnetic Field | Chapter 29 — Electric Circuits |
| Chapter 31 — Electro-magnetic Induction and Electro-magnetic Waves | Chapter 30 — The Magnetic Field |
| | Chapter 31 — Electro-magnetic Induction and Electro-magnetic Waves |
| Experiments: IV — 1 to 10. | Experiments: IV — 1, 2, 3, 4, (5)*, (6)*, 7, (8)*, (9)*, 10, 11, 12, 13. |

NOTE: Consult the Curriculum Guide for details concerning suggested time, omissions and optional material, etc.

* Do not appear in 1st Edition.

SCIENCE 11

Text

Hogg et al., *Basic Science For Secondary Schools*.

Laboratory Manual to accompany *Basic Science For Secondary Schools*.

References

i. Brandwein, et al., *Explaining The Sciences*.

ii. Moon, Otto and Towle, *Modern Biology*, (1963 Edition).

NOTE: Students may use the text *Physical Science For Secondary Schools*, Hogg, Cross and Davis and *Supplement to Physical Science For Secondary Schools*, in lieu of *Basic Science For Secondary Schools*, Hogg et al.

Course Content

Unit I — The Earth As It Began (Optional)

1. The Earth — Its Origin.
2. Waters of the Earth.
3. The Earth's Atmosphere.

Unit II — Earth, The Abode of Man

4. The Earth — Its Shape and Motion.
5. Rocks of the Earth (1).
6. Rocks of the Earth (2).
7. The Changing Earth (optional).
8. The Formation of Mountains.
9. The Record of Rocks (optional).
10. Earth History (optional).

Unit III — Weather

11. Winds and Air Masses.
12. Fronts and Storms.
13. Weather Forecasting (1).
14. Weather Forecasting (2) (optional).
15. What is Climate?

Unit IV — Chemistry, Fuels and Some Industries

16. Oxygen and Hydrogen.
17. Water, An Important Compound.
18. A Chemist's Language and Shorthand.
19. The Structure of the Atom (optional).
20. Fuels: Solid, Liquid and Gaseous.
21. Some Chemical Industries.
22. Metals (optional).
23. Foods, Drugs and Antiseptics.

Unit V — Electricity

24. Magnetism.
25. Static Electricity.
26. Current Electricity.
27. Heat and Light from Electricity.
28. Power from Electricity.

Unit VI — Communications (optional)

29. What is Sound?
30. Sound Instruments.
31. The Telephone and Some Electronic Devices.
32. Radio and Television.

Unit VII — Atoms and Stars (optional)

33. Power from Atoms.
34. The Sun.
35. The Solar System.
36. Stars and Galaxies.

Unit VII — Atoms and Stars (optional)

37. The Living Cell.
38. The Classification of Plants and Animals.
39. Plants.
40. Animals.
41. Heredity — Transmission of Characteristics.

Experiments

Experimental work to be done includes those experiments listed in the *Laboratory Manual*. However, experiments 5, 18 and 19 should be considered as optional.

PHYSICS 22

Physics 22 is designed for students in vocational high schools who are taking programs which articulate with the Institutes of Technology, e.g., Drafting, Electronics, Machine Shop. It is expected that students in other programs may elect this course. Teachers should feel free to adjust the content and method of presentation to the capabilities of their classes; however, it is felt that students in the articulated programs should substantially cover the program as outlined:

Texts

White, *Physics, An Exact Science*.

White, *Laboratory Exercises to Accompany Physics, An Exact Science*.

Course Outline

1. Introduction — Lessons 3, 4*.
2. Properties of Matter — Lessons 4, 5*, 6, 7*.
3. Light — Lessons 1, 2, 3*, 4, 5*, 6, 7, 8*, 9, 10*, 11, 12, 13*, 14, 15*.

* The lessons which are marked with an asterisk are laboratory exercises.

PHYSICS 32

As for Physics 22, Physics 32 is designed for students in vocational high schools who are taking programs which articulate with the Institute of Technology and is expected to be equivalent to the Year "A" Physics program in the technical institutes. Information on course content and laboratory exercises follows:

Texts

White, *Physics, An Exact Science*.

Laboratory Exercises to accompany *Physics, An Exact Science*.

Course Outline

1. Mechanics
Lessons 1, 2*, 3, 4*, 5, 6, 7, 8*, 9, 10, 11*, 12, 13*, 14, 15, 16*, 17, 18*, 19, 21, 23, 24, 27, 29, 30*, 31, 32, 33*.
2. Electricity
Lessons 1, 2, 3, 4*, 5, 6*, 7, 9.
3. Heat
Lessons 1, 3, 7*, 8, 9, 11, 12*.

* The lessons which are marked with an asterisk are laboratory experiments.

| Physics 30X—Using 1st. Ed. | Physics 30X—Using 2nd. Ed. |
|--|--|
| New Work | New Work |
| Chapter 5 — Motion Along a Path Sec. 1 to 7, omitting 8 | Chapter 5 — Motion Along A Straight-Line Path Sec. 1 to 8 inc. |
| Chapter 6 — Vectors Sec. 1 to 7 inc. | Chapter 6 — Motion in Space Sec. 1 to 7 inc. |
| Exp. 1 — 5 | Exp. 1 — 5 |
| Part III — Mechanics | Part III — Mechanics |
| Chapter 20 — Newton's Law of Motion | Chapter 19 — Newton's Law of Motion |
| Chapter 21 — Motion at the Earth's Surface Sec. 1-8 inc. | Chapter 20 — Motion at the Earth's Surface Sec. 1-8 inc. |
| Chapter 22 — Universal Gravitation and the Solar System Sec. 6-11, read 1-5 | Chapter 21 — Universal Gravitation and the Solar System Sec. 6-11, read 1-5 |
| Chapter 23 — Momentum and Conservation of Momentum Sec. 1-4, read 5-8 | Chapter 22 — Momentum and the Conservation of Momentum 1-4, read 5-7 and rockets |
| Chapter 24 — Work and Kinetic Energy Sec. 1-8, 10 and 11 | Chapter 23 — Work and Kinetic Energy Sec. 1-8, 10 and 11 |
| Chapter 25 — Potential Energy | Chapter 24 — Potential Energy |
| Chapter 26 — Heat, Molecular Motion, Conservation of Energy | Chapter 25 — Heat, Molecular Motion, Conservation of Energy |
| Experiments : | Experiments : |
| III — 2, 3, 4, 5, 6, (8), 9, 10, 11, 12, 13, 14. | III — 1, 2, 3, 4, 5, (7), 9, 10*, 11, 12, 13. |
| Part IV — Electricity and Atomic Structure | Part IV — Electricity and Atomic Structure |
| Chapter 27 — Some Qualitative Facts About Electricity | Chapter 26 — Some Qualitative Facts About Electricity |
| Chapter 28 — Coulomb's Law and the Elementary Electric Charge Sec. 1-7 inc. | Chapter 27 — Coulomb's Law and the Elementary Electric Charge 1-7 inc. |

*Does not appear in 1st Edition.

| Physics 30X—Using 1st Edition | Physics 30X—Using 2nd Edition |
|---|--|
| Chapter 29 — Energy and Motion of Charges in Electric Fields Sec. 1-8, 13 and 14 | Chapter 28 — Energy and Motion of Charges in Electric Fields Sec. 1-7 incl. |
| Chapter 30 — The Magnetic Field | Chapter 29 — Electric Circuits Sec. 4 and 5 |
| Chapter 31 — Electro-magnetic Induction and Electro-magnetic Waves | Chapter 30 — The Magnetic Field Chapter 31 — Electro-magnetic Induction and Electro-magnetic Waves |
| Experiments : IV — 1 to 10. | Experiments : IV — 1, 2, 3, 4, (5)*, (6)*, 7, (8)*, (9)*, 10, 11, 12, 13. |

Notes to Teachers :

1. Exhaustive treatment of Chapters 30, 31 is not necessary.
2. As much quantitative treatment should be attempted as the teacher considers advisable, in Chapters 30, 31.

PHYSICS 32

As for Science 22, Physics 32 is designed for students in vocational high schools who are taking programs which articulate with the Institute of Technology and is expected to be equivalent to the Year "A" Physics program in the technical institutes. Information on course content and laboratory exercises follows :

Texts

White, *Physics, An Exact Science*.

Laboratory Exercises to accompany *Physics, An Exact Science*.

Course Outline

1. Mechanics
Lessons 1, 2*, 3, 4*, 5, 6, 7, 8*, 9, 10, 11*, 12, 13*, 14, 15, 16*, 17, 18*, 19, 21, 23, 24, 27, 29, 30*, 31, 32, 33*.
2. Electricity
Lessons 1, 2, 3, 4*, 5, 6*, 7, 9.
3. Heat
Lessons 1, 3, 7*, 8, 9, 11, 12*.

Note to Teachers

Teachers should give proper and sufficient emphasis to problem solving and laboratory activity. "Britannica Films" of thirty minutes each are available for use in conjunction with any or all lessons.

* The lessons which are marked with an asterisk are laboratory experiments.

BIOLOGY 10**Recommended Texts** (in order of preference)

High School Biology, 1968 edition (BSCS, Green Version), W. J. Gage.

*Otto and Towle, *Modern Biology*, 1965 edition, Holt, Rinehart and Winston.

Biological Science, An Inquiry Into Life, 1968 edition (BSCS, Yellow Version), Harcourt, Brace and World.

Student Laboratory Guide to *Biological Science, An Inquiry Into Life*.

*It is recommended that those who choose Otto and Towle as the basic text use the BSCS Yellow Version laboratory guide.

Objectives

1. To explore the current critical biological problems of human overpopulation, resource management and space biology.
2. To learn the basic principles of the classification of organisms and the application of these principles in the construction of keys.
3. To learn the reasons for, and the techniques of, collecting and maintaining appropriate biological specimens and to develop an appreciation of the importance of these activities.
4. To develop an understanding of the principles of ecology.
5. To study the principles of cytology and heredity.

Course Outline**Unit I — Student Biology Project**

This project will be guided by the teacher but will be selected and carried out by the student (or group of students). The project can be in any area of biology but should involve laboratory and/or field research and the writing of a report. It will be started early, will run concurrently with other units, and may continue until the end of the course.

Unit II — Classification

1. Basis of classification
2. Collecting
3. Preserving specimens
4. How to make a key and use of a key

Unit III — Ecology

1. Ecosystems and communities
2. Environmental factors
3. Interaction
4. Resource management with emphasis on pollution and conservation
5. Space biology

Unit IV — Cell Theory and Genetics

1. Cell theory
2. Mitosis and meiosis (chemistry not included)
3. Mutation and selection (adaptation)
4. Selective breeding (plant and animal)
5. Human overpopulation.

BIOLOGY 20

Recommended Texts (in order of preference)

Biological Science, An Inquiry Into Life, 1968 Edition (BSCS, Yellow Version), Harcourt, Brace and World.

Student Laboratory Guide to *Biological Science, An Inquiry Into Life*.

*Otto and Towle, *Modern Biology*, 1965 Edition, Holt, Rinehart and Winston.

High School Biology, 1968 Edition (BSCS, Green Version), W. J. Gage.

*It is recommended that those who choose Otto and Towle as the basic text use the BSCS Yellow Version laboratory guide.

Objectives

1. To further investigate the principles of ecology by carrying out a field or laboratory project.
2. To study the theories of biological evolution.
3. To show the development and relationship of form and function by comparative study of representatives of the biological kingdoms. The study of man is to be included.

Course Outline**Unit I — Student Ecology Project**

This project will be guided by the teacher but will be selected and carried out by the student (or group of students). The project can be in any area of ecology and should involve laboratory and/or field research and the writing of a report. It will be started early, will run concurrently with other units, and may continue until the end of the course.

Unit II — Evolutionary Development

1. Review Unit IV, Part 3, of Biology 10
2. The theories of evolution

Unit III — Biological Kingdoms

1. The two-, three-, and four-kingdom systems
2. The relationship of form and function in the study of comparative anatomy, morphology and life cycles of selected representatives of the kingdoms.

BIOLOGY 30**Texts**

Brown, *Chemical Background for Biology 30*, School Book Branch.

Weisz, *Elements of Biology*, (1963 or 1965 edition) including *Points of View on The Theory of Evolution* (supplement), McGraw-Hill.

Laboratory Manual

Laboratory Exercises for Elements of Biology, McGraw-Hill.

Course Content

NOTE: The former Unit I "Chemical Background" has been eliminated from the Biology 30 course. It is expected that the necessary chemistry information will be included where appropriate throughout the course.

Unit 1: The Living Organism

1. Protoplasm and Cells — Chapter 6

Unit 2: Metabolism

1. Autotrophic Nutrition — Chapter 10
2. Heterotrophic Nutrition — Chapter 11
3. Gas Exchange — Chapter 12
4. Cellular Metabolism: Respiration — Chapter 13
5. Cellular Metabolism: Energy Utilization — Chapter 14

Unit 3: Self Perpetuation: The Steady State

1. The Pattern of Control — Chapter 15
2. Cellular Controls — Chapter 15
3. The Body Fluids — Chapter 17
4. Nervous Coordination — Chapter 18
(Omit chart p. 323 except as it applies to the Neural receptors)

Unit 4: Self Perpetuation: Reproduction

1. The Pattern of Reproduction — Chapter 19
(Mitosis and meiosis are to be taught essentially as a review of Biology 20)
2. Reproduction: Monera, Protista, Metaphyta — Chapter 20
3. Reproduction: Metazoa — Chapter 21

Unit 5: Self Perpetuation: Adaptation

1. Heredity — Chapter 22
2. The Mechanism of Evolution — Chapter 23
3. The Course of Evolution — Chapter 24 and *Points of View Supplement Laboratory Exercises*: All exercises in the laboratory manual.

SOCIAL STUDIES

General Objectives

"The general objective of social education is to develop citizens who (1) understand our changing society; (2) possess a sound frame-work of values and ideals which indicate what ought to be, set goals for the individual and give direction to his actions; and (3) have the necessary competence — skills and abilities — to participate in group living in such ways as to make changes in the direction of the desired values and ideals."*

SOCIAL STUDIES 10

UNIT ONE

THE CITIZEN AND LOCAL GOVERNMENT

Text

Greason and King, *The Citizen and Local Government*. Macmillan of Canada.

Outline of Content

1. **Introduction**
 - (a) Functions of government.
 - (b) Levels of government.
2. **Why We Need Local Government**
 - (a) A practical device.
 - (b) Training for electors and elected representatives.
 - (c) Provides flexibility to meet varying local conditions.
3. **How Local Government is Organized to Meet Our Needs**
 - (a) Local bodies before 1905; Alberta organized, 1905.
 - (b) The Executive and the Legislative function in local government.
 - (c) Municipal corporations.
 - (d) School boards.
 - (e) Other local bodies.
 - (f) Democratic control and administrative efficiency.
4. **Finance, the Major Problem**
5. **The Judicial Function**

(Law enforcement at the local level).

UNIT TWO

CONSUMER EDUCATION

Suggested Time

6 to 8 weeks.

Text

Brown, N.E., *Consumer Education*, MacMillan

1. **Credit Used by Consumers**
 - (a) Meaning of credit.
 - (b) Credit requirements.
 - (c) Classes of credit.

*Quillen and Hanna, *Education For Social Competence*, Scott, Foreman & Co., p.55.

- (d) Types of consumer credit.
 - (e) Elements that determine whether to use cash or credit.
 - (f) How typical service charges are worked out.
 - (g) Sources for small loans.
- 2. Savings**
- (a) Types of real savings.
 - (b) How credit can be used as a form of savings.
- 3. Measuring and Using Credit with Wisdom**
- (a) Consideration of amount of credit obligations.
 - (b) Consideration of the amount of down payment.
 - (c) Length of time to pay off credit.
 - (d) Conditions that affect credit terms.
 - (e) Adding second purchases.
- 4. Making a Budget**
- (a) Advantages of budgeting.
 - (b) Disadvantages of budgeting.
 - (c) Steps in preparing a budget.
 - (d) Using credit when there is cash in the bank.
- 5. Legal Problems For Consumers**
- (a) Legal problems involving cash customers.
 - (b) Legal problems involving credit customers.
- 6. Becoming More Intelligent Consumers Through Wise Selection**
- (a) Making a wise selection of goods — by judging quality, by judging bargains, through close examination of packages and through discriminate buying.
 - (b) Unethical schemes (to avoid).
- 7. Advertising**
- (a) Purpose
 - (b) Kinds of sales appeal used in advertising
 - (c) Cost of advertising
 - (d) Dishonest advertising.
- 8. Consumers' Aids**
- (a) Government agencies
 - (b) Private agencies
 - (c) Magazines.

UNIT THREE

OUR HERITAGE FROM THE PAST

Text

Hardy, W. G., *Our Ancient Heritage*. McClelland and Stewart

- 1. From the Beginning to the Greeks**
 - (3 weeks)
 - (a) The beginnings of mankind

- (b) Some early civilizations
 - i. Mesopotamia
 - ii. Egypt
 - iii. Phoenicia
 - iv. The Hebrews
 - v. Persia.
- (c) The heritage from the early civilizations, in communications, mathematics, technology and religion.

2. The Greeks

(6 weeks)

- (a) Survey of Greek history from the formative period to Macedonian conquest
- (b) Life in Periclean Athens
- (c) The heritage from Greece, in philosophy, government, literature, art, science and sports.

3. The Romans

(6 weeks)

- (a) Survey of Roman history from the early peoples of Italy to the decline of the Empire
- (b) Life in Rome, at the end of the Republic, and at the height of the Empire
- (c) The heritage from Rome, in government, law, science and aesthetics.

UNIT FOUR and UNIT FIVE

Suggested Time

(4 weeks each)

These two units may be chosen from a suggested list of eleven electives. Some of them represent an extended treatment of material discussed in Unit III.

Others are more particularly related to contemporary social living.

Outlines of Suggested Topics

ELECTIVE A

LIFE IN THE MIDDLE AGES

1. Political Organization

- (a) Breakdown of central authority after the fall of Rome
- (b) Consolidation of authority
- (c) Rise of feudalism.

2. Economic Features of the Middle Ages

- (a) Results of breakdown of Roman Empire
 - i. Decline of trade and growth of self-sufficiency
 - ii. Land as the basic form of wealth
 - iii. Revival of trade
- (b) Impact of Crusades

- (c) The Rise of the Middle Class
 - i. Emergence of merchant group
 - ii. Domestic industries and apprenticeship system
 - iii. Organization for trade.

3. Cultural Pattern of the Middle Ages

- (a) Establishment of Christianity as state religion of Rome
- (b) The unifying influence of the church in political, educational and social matters
- (c) Other cultural influences associated with architecture, painting, literature, rise of universities and new ideas in science.

References: See Curriculum Guide

ELECTIVE B FAMILY LIVING

- 1. Development as a Social Institution and Nature of Functions in Early Cultures.**
- 2. Significance of Family Organization to: The Parents, Children and the Nation.**
- 3. Problems of the Modern Family:**
 - (a) Obligations concerning marriage relationships
 - (b) Housing
 - (c) Development of social attitudes
 - (d) Moral and religious values
 - (e) Education: aims, kinds, and financial assistance
 - (f) Recreational activities:
 - i. Government agencies: Cultural Affairs, Canada Council, CBC
 - ii. Commercialized recreational service
 - iii. Athletics: importance, personal, school and community
 - (g) Effect of urbanization
 - (h) Social Welfare
 - i. Local level
 - ii. Provincial and federal levels
 - (i) Disruptive economic and social pressures.

References: See Curriculum Guide

ELECTIVE C AESTHETIC AND CULTURAL VALUES

1. Early Art

- (a) Pictures, carvings — media
- (b) Perspective
- (c) Development of sculpture
- (d) Development of architecture:
 - i. Pyramids, columns, vaulted roof, arch, buttress
 - ii. Examples in various countries
 - iii. Gothic architecture of Middle Ages
- (e) Brief reference to pre-Renaissance and Renaissance Periods — art and architecture.

2. Development of Modern Trends

- (a) Change to worldly themes
- (b) Surrealism
- (c) Abstract expression.

3. Modern Encouragement to Art

- (a) Establishment of museums and art galleries
- (b) Establishment of community art clubs
- (c) Government assistance to art organizations.

4. Music

- (a) Review of nature and role of music in early times
- (b) Brief consideration of development in Renaissance period
 - i. Relationship to the Reformation
 - ii. New themes: sonatas, operas
 - iii. New instruments and new arrangements.

5. Present-Day Features and Facilities

- (a) Symphonies and other musical concerts
- (b) Encouragement to public consumption
- (c) Maintenance of music appreciation of various ethnic groups
- (d) Role of music in the schools
- (e) Musical festivals and societies for instrumental, band and ballet
- (f) Role of Cultural Affairs Branch, CBC and Canada Council.

References: See Curriculum Guide

ELECTIVE D RELIGION AND ETHICS

- 1. Meaning of Each and their Relationship**
- 2. Characteristics of Religion**
- 3. Bases for Religious Beliefs**
- 4. Evidence and Nature of Primitive Religions**
- 5. Pagan Polytheism of Ancient Cultures**
- 6. Early Monotheistic Religions — Judaism and Zoroastrianism**
- 7. Rise of Christianity**
- 8. Areas Dominated by Other Religions**
- 9. Ideals Common to Modern Religions**

References: See Curriculum Guide

ELECTIVE E

A BACKGROUND TO CURRENT EVENTS (Contemporary World Problems)

An intensive study of about four major world problems. Rather than a brief review of isolated events it is suggested that each problem selected for study in this elective should be considered from many angles in order to gain a depth of understanding.

ELECTIVE F
DEVELOPMENT OF WESTERN LITERATURE

- 1. Great Writings of the Long Past**
 - (a) The Old Testament
 - (b) Homer.
 - 2. Greek Literature of the Classical Past**
 - (a) Drama
 - i. The theatre and the chorus
 - ii. The tragedy
 - iii. The comedy
 - (b) Greek poetry
 - (c) Early Greek writers of history
 - (d) Writers of philosophy
 - (e) New Testament.
 - 3. Roman Literature and the Classical Past**
 - (a) The comedy
 - (b) Early writers of the first century
 - (c) The Augustan Age
 - (d) The last Roman writers.
 - 4. Establishment of Libraries**
 - 5. Literature of the Middle Ages**
 - (a) Ballads
 - (b) Chronicles
 - (c) Poetry
 - (d) Miracle plays.
 - 6. The Renaissance Period**
 - (a) New age of drama
 - (b) Use of the vernacular
 - (c) Developing of new literary forms
 - (d) Effect of printing.
 - 7. Nature of Contemporary Literature**
 - (a) Classes
 - (b) Style and content
 - (c) Purpose and influence.
 - 8. Modern Facilities to Promote Familiarity with Literature**
 - (a) Libraries
 - (b) Book clubs
 - (c) Theatres
 - (d) Drama associations
 - (e) Canada Council.
- References: See Curriculum Guide

ELECTIVE G
ANCIENT PHILOSOPHY

1. **Nature and Origin of Early Philosophy**
 2. **Organization of Philosophy**
 - (a) Early Philosophy
 - i. Mythological explanations
 - ii. Homer, Hesiod
 - (b) Pre-Socratic philosophers
 - i. Thales, Anaximander, Anaximenes
 - ii. The Pythagoreans
 - iii. The Heracliteans
 - a. Xenophanes
 - b. Heraclitus
 - iv. The Eleatics
 - a. Parmenides
 - b. Zeno
 - v. The Atomists
 - a. Democritus.
 3. **Socratic Philosophy**
 - (a) Sophists — Protagoras, Georgias
 - (b) Socrates
 - (c) Plato
 - (d) Aristotle.
 4. **Hellenistic-Roman Philosophy**
 - (a) Stoicism (Epictetus)
 - (b) Epicureanism (Epicurus)
 - (c) Scepticism (Pyrrho).
- References: See Curriculum Guide

ELECTIVE H
EDUCATION

1. **Present Educational System For Alberta**
 - (a) Financial support
 - (b) Courses
 - (c) Cultural, social or vocational purposes.
2. **Education in the Ancient World**
 - (a) Greek
 - (b) Hebrew, or
 - (c) Roman.
3. **Education in the Medieval World, as Given Through the Monastery, Guild or University.**

4. Education in Primitive Societies of Today

- (a) Nature
- (b) Purposes
- (c) Agencies.

5. Modern Educational Advances

- (a) State responsibility
- (b) Compulsory requirements
- (c) Education for all children
- (d) Curricular changes
- (e) Present-day importance
- (f) New trends.

References: See Curriculum Guide

ELECTIVE I

DEVELOPMENT AND NATURE OF LEGAL AUTHORITY

1. Need of Laws

2. Nature of Authority

- (a) By one or a few
- (b) Early forms
- (c) Early law-givers
- (d) Roman codes.

3. Later Legal Developments

- (a) Documents
 - i. Magna Carta
 - ii. Habeas Corpus
 - iii. Bill of Rights
 - iv. Code Napoleon
 - v. Canadian Bill of Rights
- (b) Nature of Arbitrary Rule.

4. Modern Day Comparisons

5. Nature of Canadian Legal Authority

- (a) Kinds of courts and of law enactments
- (b) Respect of law and enforcement agencies.

References: See Curriculum Guide

ELECTIVE J

ANCIENT GEOGRAPHY

1. Early Stories of Other Lands

2. Geographical Achievements in the Mediterranean

- (a) Reasons
- (b) Early trade routes.

3. **Early Writers of Geography**
 - (a) Thales
 - (b) Herodotus
 - (c) Aristotle
 - (d) Alexander
 - (e) Pytheas.
4. **Identification of Position**
 - (a) Egyptians
 - i. By intersection
 - ii. By triangulation
 - (b) Assyrians.
5. **Attempts to Measure and Map the Earth**
 - (a) Theory that earth was round
 - i. Pythagoras
 - ii. Other Greek observations
 - (b) Problem of measurement
 - i. Eratosthenes
 - ii. Hipparchus
 - a. Astrolabe
 - b. Map projections
 - c. Spherical theory
 - iii. Posidonius.
6. **Ideas About Climatic Zones of the World**
7. **Summaries by Geographers**
 - (a) Strabo
 - (b) Ptolemy.

References: See Curriculum Guide

ELECTIVE K

DEVELOPMENT OF SCIENCE AND TECHNOLOGY

1. **The Scientific Method of the Renaissance Period**
 - (a) Meaning and importance
 - (b) Significant thinkers — Bacon, Descartes, Newton
 - (c) A concise review of the effect of science on trade and invention.
2. **Effect of Science on Conditions of Modern Living**
 - (a) Of automation
 - (b) An appreciation of science in relation to modern living conditions
 - i. Transportation, communication, production and exchange
 - ii. Industrial progress, new comforts
 - iii. New drugs and effect on health and longevity of life
 - (c) Conservation of resources.
3. **The Modern Technological Revolution in Business and Industry.**

References: See Curriculum Guide

SOCIAL STUDIES 20

Text

Lawrence, Mix and Wilkie, *Our European Heritage*

Course Content

UNIT ONE

THE EXPANSION OF HABITABLE AND PRODUCTIVE AREAS SINCE THE BEGINNING OF THE MODERN AGE

1. **Scientific Thinking in the Field of Geography in the Renaissance Period**
Concepts of the earth during the fourteenth century.
The Renaissance in the learning of the ancient world.
Practical inventions and new ideas.
2. **The Geography of Discovery and Colonization**
The Atlantic barrier to expansion of civilization.
The conquest of the oceans.
The period of exploration of the New World was followed by that of
colonization and expansion of settlement.
3. **The Effect of Exploration and Early Colonization Upon the Parent
Civilization**
Increased knowledge of the world.
The development of new areas of settlement.
Trade in Europe given tremendous impetus.
Far-reaching economic results.
Improved transportation.
The spread of civilization as a result of missionary zeal.
The shift in political power.
4. **Present Day Distribution of Population Contrasted with that at the
Beginning of the Modern Period**
Civilized areas in Columbus' time.
Colonization on the eastern coasts of America.
Factors responsible for modern distribution of population in America,
coastal Asia and Africa.
5. **The Application to a Modern Situation of the Concepts Learned in this
Unit**

UNIT TWO

THE EFFECT OF SCIENCE ON OUR ECONOMIC LIFE

1. **The Distinctive Industrial Character of Modern Civilization**
2. **The Application of Science to Industry**
The Agricultural Revolution.
The Industrial Revolution.

3. **The Economic Principles of Modern Production and Distribution**
The factors of production: land, labor, capital and management.
The relationship between capital and labor.
4. **The Application to a Modern Situation of the Concepts Learned in this Unit.**

UNIT THREE

THE RISE OF NATIONALISM: THE EXPANSION OF EUROPEAN EMPIRES

1. **The Formation of Nation-States at the Beginning of the Modern Age**
England.
France.
Spain.

2. **Imperial Expansion and Colonial Rivalry (Economic Factors)**
Spain.
Great Britain.
France.

3. **The Concepts of Nationalism and Liberalism**

Great Britain

The Tudor Period.
The Stuart Period.
Union of England and Scotland.

France

Absolute Monarchy.
Influence of liberal writers.
The French Revolution.
The Napoleonic Period.
The Revolution of 1848.

America

The American Revolution.
The Latin American countries.

4. **Imperial Aspirations in the Late 19th Century**

Delayed Unification:

Russia.
Prussia unifies Germany.
Sardinia unifies Italy.
Rivalry for trade and colonies.

5. **The Application to a Modern Situation of the Concepts Learned in this Unit.**

UNIT FOUR

THE DEVELOPMENT OF PARLIAMENTARY GOVERNMENT IN BRITAIN AND IN CANADA AND COMPARISON WITH THE CONSTITUTION OF THE UNITED STATES

1. The Growth of Parliamentary Institutions (Representative Government) in England (to 1700)

Origins of parliamentary institutions in the thirteenth century.

Parliament in the time of the Tudor rulers.

The struggle for authority between parliament and the Stuart sovereigns.

2. The Rise of Responsible (Cabinet) Government in Great Britain; the Extension of Democracy (to 1900)

The origin of political parties in Great Britain.

The first Cabinets.

The first Prime Minister.

The principle of Cabinet responsibility.

3. A Brief Outline of Canadian Constitutional Development

The government of New France (a) by fur companies, (b) by royal officials, (c) under British military rule, 1760-63.

The government of the colony of Quebec in the first years of the British period.

Proclamation of George III.

The Quebec Act, 1774.

The introduction of representative government in the British North American colonies.

The Constitutional Act, 1791.

The movement toward responsible government:

The Rebellion of 1837 and the Durham Report.

The Act of Union, 1841.

The principle of responsible government established (1) in Nova Scotia, 1848; (2) in the Province of Canada, 1849.

The adoption and extension of the federal plan: Conferences.

The British North America Act, 1867.

The inclusion of provinces additional to the original four.

4. The Nature of the Constitution of the United States

Some points of similarity between the British constitution and that of the United States.

Some points of similarity between the Canadian constitution and that of the United States.

Some points of difference between the constitution of the United States and (a) that of Great Britain
(b) that of Canada.

5. The Application to a Modern Situation of the Concepts Learned in this Unit.

UNIT FIVE
SOCIAL ENLIGHTENMENT AND REFORM

1. **Social Problems in England Prior to the Industrial Revolution: Remedies Attempted**
The contributions to social welfare of the guild and the monastery.
The first modern attempts of the state to deal with social problems.
2. **Social Conditions Resulting From the Industrial Revolution**
Overcrowding in cities
Employment of women and children
Increased wealth
Great class distinction.
3. **Enlightenment and Social Improvement**
Forerunners in social thinking (e.g., the leaders in the Renaissance movement: Hobbes and Locke; Diderot, Rousseau and Voltaire)
John Wesley and the Methodists
William Wilberforce and the anti-slavery movement
John Howard, Elizabeth Fry and prison reform
Florence Nightingale and care of the sick; the Red Cross Society.
4. **The Assumption of Responsibility for Social Reform by the State**
Factory Acts
Health measures
The reform of criminal law
Education
State welfare services.
5. **Modern Applications of the Concept Learned in this Unit.**

UNIT SIX
THE BACKGROUND OF CANADIAN CULTURE AND RELIGIOUS DEVELOPMENT

1. **A Definition of Culture**
Examples
2. **The Spirit of the Renaissance**
The revival of learning
Renaissance literature
The glory of the Renaissance in painting, sculpture and architecture
Music in the new day.
3. **The Reformation**
Religious thought in pre-Reformation Europe
The rise of Protestantism.
The Catholic Reformation
The Reformation in England and Scotland
Post-Reformation developments in religious thought.

4. **Features of Cultural and Religious Life in Britain and Other European Countries**
Art and architecture
Literature
Music
Religious thought
Education.
5. **Features of Canadian Religious and Cultural Life**
Early missions and missionaries
Varied religious groups in Canada
Art
Literature
Music
Education.
6. **The Application to a Modern Situation of the Concepts Learned in this Unit.**

SOCIAL STUDIES 30

SOCIAL STUDIES 33

Primary References

- Berry, G. L., *Problems and Values*.
Smith, P. J., *Population and Production*.
Powrie, T. L., *Political and Economic Systems*.
Campsie, J. S., *Conflict and Co-operation*.

Secondary References

Consult the Senior High School Curriculum Guide for Social Studies 10, 20, 30.

Objectives

The course endeavors :

- (1) To enable students to acquire a body of knowledge concerning human conditions, comprised of fundamental concepts ordered in disciplined ways;
- (2) To develop in students some facility for the modes of inquiry through which knowledge in the social domain is discovered, verified and reconstructed;
- (3) To develop the ability to think critically and creatively about persistent social issues;
- (4) To provide a forum for dealing with normative questions in an intellectually and ethically responsible way;
- (5) To develop the ability to analyse issues and to arrive at consensus or to reach valid conclusions;
- (6) To promote understanding of the similarities and differences of various peoples, including evaluation of conflicting beliefs, ideologies and value systems;
- (7) To develop a continuing concern for the current problems of mankind.

UNIT ONE

POPULATION AND PRODUCTION

Part I: World Patterns and Trends of Population and Production.

Part II: Consideration of how a world problem affects various parts of the world.

Case Studies :

- A. Regions of High Population Density
 - A Commercial Economy: Great Britain — the St. Lawrence — Lower Great Lakes Lowland.
 - A Subsistence Economy: India.
 - A Transitional Economy: Japan.
- B. Regions of Moderate Population Density
 - A Commercial Economy: The Canadian Prairie Provinces.
 - A Subsistence Economy: Iran.
 - A Transitional Economy: Peru.
- C. Regions of Low Population Density
 - A Commercial Economy — The Canadian Northland.
 - A Subsistence Economy — The Central African Republic.

The objective in this unit is to develop an awareness of and a rational approach to the problems that arise out of population increase and scarcity of resources.

UNIT TWO

POLITICAL AND ECONOMIC SYSTEMS

Part I: Kinds of Political and Economic Systems

- i. Democratic Polity and Private Enterprise Economy
 - Essentials of the private enterprise economy
 - Essentials of democracy
 - Control of the public purse in Canada
 - Income distribution in Canada
- ii. Dictatorial Polity and Public Enterprise Economy
 - Essentials of economic planning
 - Essentials of dictatorship
 - Government of the U.S.S.R.
 - Central planning in the U.S.S.R.

- iii. Democratic Polity and Public Enterprise Economy
— Democratic Socialism (Sweden)
- iv. Dictatorial Polity and Private Enterprise Economy
(Nazi Germany or Mexico under Diaz)
- v. Traditional Society
 - Essentials of traditional society
 - Examples of traditional society
(North India village; Embu of Kenya)

Part II: Problems of Underdeveloped Countries

- Political and Economic Problems of Underdeveloped Countries
such as India, China and Latin America.

Part III: Developed Countries and the Issue of Collectivism

- Growth of the Role of Government in Wealthy Countries
(Examples of Government's share of income)
- Individual Freedom in a Complex Society (Problems of government control and personal liberty).

The objective here is a clear understanding of the problems confronting the individual and the nation as the complex and difficult issues of politics and economics are discussed.

UNIT THREE

CONFLICT AND CO-OPERATION

1. The European Ascendancy.
2. The Rise of Socialism.
3. The End of an Era.
4. The New World Order.
5. Depression and Dictatorships.
6. The Triumph and Downfall of the Axis Aggressors.
7. The Renewed Search for World Order.
8. The Cold War.
9. The World in Transition.

The main objectives in this unit are to develop principles which will help illuminate the conflict affecting the development of society today; and further, to develop an awareness of sources and areas of conflict both national and global and of attempts through co-operation to improve relations.

SOCIOLOGY 20

The general objectives of sociology are:

1. Develop in students a sociological orientation.
2. Communicate a conception of the nature of society, how it operates, perpetuates itself and changes.
3. Create some understanding of the problems of our contemporary, complex society; the processes which give rise to them and how they may best be resolved.

Text

Landis, P. H., *Sociology*, Ginn and Company, 1964.

Course Content

Unit I — The Science of Sociology.

- (a) What is sociology?
- (b) Relationship of sociology to other social sciences.
- (c) History of sociology.
- (d) Methods of sociological investigation.
- (e) Impact of sociology on contemporary society.

Unit II — Man and His Environments: Potentialities and Limitations.

- (a) Heredity and environment.
- (b) The geographical environment.
- (c) The cultural environment.
- (d) The social environment.
- (e) Kinds of groups.
- (f) Forms of interaction.

Unit III — Culture — The Man-made World.

- (a) The cultural heritage.
- (b) The contemporary Canadian culture.
- (c) Cultural change.
- (d) Cultural lag.

Unit IV — Groups in Socialization.

- (a) The development of the social self.
- (b) The role of communication.
- (c) Small groups in socialization.
- (d) Secondary groups.
- (e) Human nature.

Unit V — The Structure of Society.

- (a) Stratification, power and influence.
- (b) Social mobility.
- (c) Canadian social class structure.
- (d) Subcultures.
- (e) Finding our place in an open-class society.

Unit VI — Governmental Structure and Economic Order.

- (a) The democratic process.
- (b) Government (Umpire and Servant).
- (c) International relationships.
- (d) Persistent problems in foreign affairs.
- (e) The economic system.
- (f) Labor management relations.
- (g) Quest for economic security.

Unit VII — Minority Groups in Societies.

- (a) Causes of prejudice and discrimination.
- (b) Consequences of prejudice and discrimination.

- (c) Minority group relationships in the world today.
- (d) Reduction of prejudice and discrimination.

Unit VIII — Marriage and the Family.

- (a) A brief history of the family.
- (b) Types and forms of the family.
- (c) Family formation.
- (d) Why love marriages.
- (e) Contrasting goals in marriage.
- (f) Canadian family structure.
- (g) Values in mate selection.
- (h) Family cycle.
- (i) The three stages of marriage.
- (j) Problem concepts of dating.
- (k) Dangers of steady dating.
- (l) Love and romantic complex.
- (m) Cycle leading to and ending in marriage.
- (n) Divorce.
- (o) Marriage analysis.

Unit IX — Crime, Punishment and Delinquency.

- (a) The law and crime.
- (b) Crime and punishment today.
- (c) Punishment and reformation.
- (d) Juvenile delinquency.
- (e) Juvenile courts vs. criminal courts.

Unit X — The Conservation of Human Resources.

- (a) Historical growth of the world's population.
- (b) Present growth.
- (c) Future growth.
- (d) Distribution of population and human ecology.
- (e) History of the community.
- (f) Shift from country to city.
- (g) The modern city.
- (h) Theories of urban ecology.
- (i) New trends in urban ecology.
- (j) Rural problems.
- (k) Education.
- (l) Improving the health of the world.

Unit XI — Religion and Ethical Ideals.

- (a) Religion, a universal need of man.
- (b) Religious structure.
- (c) Religious roles.
- (d) Religious functions.
- (e) Religion and immortality.
- (f) Religious tolerance.
- (g) Religion and morality.
- (h) Religion and family life.
- (i) Organized religion today.
- (j) Denominationalism.

Unit XII — The Future of Man.

- (a) Social planning.
- (b) Causes of social problems.
- (c) Present and future social trends and problems.

VOCATIONAL COURSES

AGRICULTURAL MECHANICS 22, 32

General Objectives

The purpose of this program is:

1. To enable the student to develop skill in the correct use and care of hand and machine tools required for the servicing and maintenance of farm machinery and equipment.
2. To develop an understanding of the design and operating principles of farm machinery in order that the student may repair and service the equipment intelligently.
3. To develop habits which will result in good use of time and materials, good work relationships and safe practices.

AGRICULTURAL MECHANICS 22

Course Content

Unit I — Welding

A. — Oxy-Acetylene Welding

1. Using and storing equipment.
2. Welding Ferrous Metals.
3. Braze Welding and Brazing.
4. Cutting.

B. — Electric Arc Welding

1. Installing and Using Welders.
2. Welding Ferrous Metals.

Unit II — Farm Shop

A. — Introduction

B. — Bench Metalwork

C. — Machine Metalwork

D. — Hot Metalwork

E. — Sheet Metalwork

Unit III — Farm Power Units and Power Transmission

A. — The Internal Combustion Engine

1. Engine Principles and Design.
2. Fuel System.
3. Ignition System.
4. Engine Operation.

B. — Power Transmission

1. Levers.
2. Pulleys and Belts.
3. Friction Wheels.
4. Gears.
5. Bearings.
6. Transmissions.
7. Differentials.
8. Clutches.
9. Chain and Sprockets.
10. Cams and Cranks.
11. Power Take-Offs.
12. Hydraulics.

Unit IV — Farm Machinery

AGRICULTURAL MECHANICS 32

Unit I — Farm Power

Course Content

- A. — Fuel Systems
- B. — Cooling Systems
- C. — Lubrication Systems
- D. — Electrical Systems
- E. — Service Work

Unit II — Farm Machinery

Unit III — Farm Buildings

Unit IV — Welding

A. — Oxy-Acetylene Welding

1. Metallurgy.
2. Welding Cast Iron.
3. Welding non-Ferrous Metals.
4. Surfacing.

B. — Arc Welding

1. Review.
2. Welding Cast Iron.
3. Surfacing.

AUTO BODY 12, 22, 32

Texts

Auto Body 22

Venk, Spicer and Davies, *Automotive Collision Work*, 3rd edition.

Auto Body 32

Sargent, *Automobil Sheet Metal Repair*.

Objectives

1. To equip a student with sufficient skill and knowledge such that he will be highly employable in the automotive industry.
2. To enable the student entering the Auto Body Apprenticeship program, to advance at an accelerated rate on the basis of his proven ability on the job.
3. To encourage the student in the development of desirable work habits, a sense of responsibility and the ability to cooperate with his associates.
4. To develop an attitude of safety consciousness in the student, regarding all phases of the automotive industry.

AUTO BODY 12

1. Introduction; i.e. nature of work, training necessary, future of trade, working conditions, related occupations.
2. Shop familiarization; tour of shop, shop organization and procedures.
3. Cutting metal with hacksaw.
4. Drilling a hole using drill press and electric hand drill.
5. Using a grinder.
6. Sharpening chisels.
7. Fastening bolts and nuts.
8. Extinguishing fires.
9. Construction of automobile body.
10. Alignment.
11. Metal finishing.
12. Auto Body welding — history of oxy-acetylene welding.
13. Functions of interior finishing.
14. Introduction to Auto Body painting.
15. Surface preparation and sanding of bare metal, old paint surface and masking.
16. Spraying equipment.

AUTO BODY 22

1. Introduction.
2. Shop Safety.
3. Language and Tools of Auto Body.
4. Alignment.

5. Metal Finishing.
6. Auto body welding.
7. Auto body painting.
8. Interior body trim and hardware.

AUTO BODY 32

1. Introduction
 - (a) Construction, use and maintenance of the spray booth and heat lamps.
 - (b) Decision on repairable and replaceable parts.
 - (c) Installation of new parts.
 - (d) Auto body business fundamentals, estimating, flat rate schedules.
2. Alignment.
3. Metal finishing.
4. Auto Body Welding
 - (a) Review of safety practices for welding.
5. Auto Body Painting.
6. Auto Body Trim and Hardware.

AUTOMOTIVES

Texts

Automotives 12

Nash, *Automotives Fundamental*, 2nd edition.

Automotives 22 and 32

Crouse, *Automotive Mechanics*, 5th edition.

General Objectives

1. To equip a student with sufficient skill and knowledge that he will be highly employable in the automotive industry.
2. To enable the student entering the automotive apprenticeship program to advance at an accelerated rate on the basis of proven ability.
3. To encourage the student in the development of desirable work habits, a sense of responsibility and the ability to cooperate with associates.
4. To develop an attitude of safety consciousness in the student.

AUTOMOTIVES 12

Objectives

1. To develop an understanding of the operation and construction of the various components of the automobile.
2. To develop basic skills in the care and safe use of hand and power tools.
3. To make the student familiar with service and repair procedure.
4. To impart occupational information related to the opportunities in the automotive industry.

Course Content

1. Introduction and Basic Tools.
2. Chassis.
3. Lubrication and Servicing.
4. The Internal Combustion Engine.
5. Fuel System.
6. Hydraulic Brake System.
7. Transmission.
8. Drive Line.
9. Rear Axle Assembly.
10. Front End.
11. Steering.
12. Ignition.
13. Trade Information.

AUTOMOTIVES 22

Course Content

1. Orientation.
2. Shop Safety.
3. Power Tools.
4. The Clutch.
5. Transmission and Overdrive.
6. Driveshafts and Universal Joints.
7. Rear Axle.
8. Braking System.
9. Steering and Wheel Alignment.
10. Wheels and Tires.

AUTOMOTIVES 32

1. Orientation.
2. The Engine and Engine Overhaul.
3. The Lubricating System.
4. The Cooling System.
5. The Fuel System.
6. The Electrical System.
7. Tune-up.
8. Guidance Information.
9. Business Organization.

BEAUTY CULTURE 12, 22, 32

Texts

Professional Training For Beauticians — (Milady Publishing Corp.)
The Van Dean Practical Workbook — (Milady Publishing Corp.)

Objectives

1. To equip students with sufficient skill and knowledge to be efficient beauticians.
2. To develop good habits of work, safety, courtesy, etc.
3. To develop a high standard of craftsmanship and cleanliness.
4. To acquaint the students with the range of opportunities in beauty culture.

BEAUTY CULTURE 12

Course Content

1. Code of Ethics and Professional Conduct.
2. History of Beauty Culture.
3. Safety.
4. Sterilization and Sanitation.
5. Trichology.
6. Shampooing.
7. Pin Curling.
8. Haircutting.
9. Fingerwaving.
10. Braiding.
11. Scalp Treatments.
12. Permanent Waving.
13. Manicuring.
14. Salesmanship.

BEAUTY CULTURE 22

Course Content

1. Advanced Styling.
2. Physiology.
3. Facials.
4. Eyebrows.
5. Eyelashes.
6. Makeup.
7. Hair Coloring.
8. Electricity.
9. Review of Salesmanship.

BEAUTY CULTURE 32

Course Content

1. Advanced Styling.
2. Wigs.
3. Hair Pieces.
4. Advanced Hair Coloring.
5. Makeup.
6. Modelling and Self-Improvement.
7. Preparation for Specialization.
8. Review of Salesmanship.
9. Shop Management.

BUILDING CONSTRUCTION**BUILDING CONSTRUCTION 12****Text**

Miller, *Hand and Machine Woodwork*.

General Objectives

1. To acquaint the student with the construction industry and the opportunities in this field.
2. To equip a student with sufficient skill, that he will be highly employable in the construction industry.
3. To enable a student entering the carpentry apprentice program to advance at an accelerated rate on the basis of his proven ability.

Course Content

1. Orientation.
2. Safety.
3. Hand Tools.
4. Tool Reconditioning and Maintenance.
5. Materials.
6. Machine Tools.
7. Estimating.
8. Site Layout and Survey.
9. Drafting & Blueprint Reading.
10. Related Information.

BUILDING CONSTRUCTION 22 and 32**Texts**

Bellis and Schmidt, *Blueprint Reading for the Construction Trades*.
Miller, *Building Construction: Materials and Methods*.
Smith, *Materials of Construction*.

BUILDING CONSTRUCTION 22**Course Content**

1. Hand Tools.
2. Stationary Tools.
3. Power Tool Maintenance.
4. Construction Organization.
5. Preliminary Building Operations.
6. Footings, Slabs and Foundations.
7. Concrete Handling and Finishing.
8. Auxiliary Equipment.
9. Explosive Actuated Tools.
10. Framing.

11. Finishing.
12. Materials.
13. Drafting.
14. Trade Mathematics.

BUILDING CONSTRUCTION 32

Course Content

1. Power Tools.
2. Power Tool Maintenance.
3. Hand and Circular Saw Blade Maintenance.
4. Finishing.
5. Commercial Concrete Construction Forming.
6. Materials.
7. Blueprint Reading.
8. Trade Mathematics.
9. Estimating.
10. Stair Construction.

COMMERCIAL ART

Objectives *

1. To fit students for employment in secondary art field such as sign and show card writing.
2. To develop skills and understanding in subjects that would be presented at an advanced art training school.
3. To develop appreciation of good design.
4. To develop sound craftsmanship through proper disciplined approach to use of tools and machinery.

COMMERCIAL ART 12

Course Content

1. Basic Drawing.
2. Design.
3. Color.
4. Basic Lettering.
5. Layout for Commercial Purposes.
6. Illustration and Picture Making.
7. Opportunities in Art and Related Occupations.

COMMERCIAL ART 22 AND 32

1. Sign and Show Card Writing.
2. Display.
3. General.

DRAFTING**Texts****DRAFTING 12**

Jensen and Mason, *Drafting Fundamentals*, 2nd edition.

DRAFTING 22

Gieseke, Mitchell, Spencer and Hill, *Technical Drawing*, 5th edition.

DRAFTING 32

Gieseke, Mitchell, Spencer and Hill, *Technical Drawing*, 5th edition.

Objectives

1. To prepare a student for employment in the drafting industry.
2. To prepare a student to a degree of competency acceptable to the Institutes of Technology for entrance into the second year of drafting technology or architectural technology.
3. To supply those going into related fields such as estimating, etc., with enough skills so that they may do blueprint reading and drafting.
4. To develop the personality of the student so that he will be reliable, industrious, cooperative and socially acceptable.
5. To develop a systematic approach to solving problems of the type likely to be encountered in industry.
6. To assist the student in reading, appraising and understanding technical language.

DRAFTING 12**Objectives**

1. To create a desire for proficiency and accuracy in drafting and related theory.
2. To develop habits of neatness, cleanliness and orderliness in work situations.
3. To understand the importance of drafting and related technical skills and knowledge in an industrial nation.

Course Content

1. Lettering.
2. Sketching.
3. Use and Care of Instruments.
4. Layout.
5. Orthographic Projection.
6. Scale Drawing.
7. Dimensioning.
8. Isometric Drawing.
9. Oblique Projection.

DRAFTING 22 AND 32

Specific Objectives

1. To promote an appreciation of craftsmanship in drafting.
2. To work in an orderly and efficient manner.
3. To develop skills in lettering, mechanical drawing and sketching.
4. To provide practical knowledge and experience in the fields of metalwork and building construction.

DRAFTING 22

Course Content

Part I (Drafting 22)

1. Lettering.
2. Instruments and Materials.
3. Geometrical Construction.
4. Theory of Projection.
5. Dimensioning.
6. Reproduction of Drawing.
7. Metal Layout Work.
8. Bench Work.
9. Metal Fasteners.
10. The Drill Press.
11. The Engine Lathe.
12. Abrasives and Grinding.
13. Metallurgy.

Part II (Metalwork for Drafting 22)

1. Layout Work.
2. Bench Work.
3. Abrasives and Grinding.
4. Drilling.
5. The Engine Lathe.
6. Metallurgy.

DRAFTING 32

Part I (Drafting)

1. Trade Information.
2. Blueprint Reading.
3. Design Fundamentals.
4. Detail and Assemble Drawings.
5. Developments and Intersections.
6. Materials for Construction.
7. Hand Tools.
8. The Foundation.
9. Floor Framing.
10. Wall Framing.

11. Ceiling Framing.
12. Roof Framing.
13. Other Roof Systems.
14. Exterior Finishing.
15. Interior Finishing.

Part II (Building Construction)

1. Shop Orientation.
2. Hand Tools and Bench Work.
3. Machine Woodworking Tools.
4. Joinery.
5. Building Construction.

ELECTRICITY 12, 22, 32

Texts

ELECTRICITY 12

Long, *Intermediate Electricity*.

Zbar and Schildkraut, *Laboratory Manual — Basic Electricity*.

ELECTRICITY 22

Canadian Electrical Code, Part I.

Lister, *Electric Circuits and Machines*, 4th edition.

Zbar and Schildkraut, *Laboratory Manual — Basic Electricity*.

ELECTRICITY 32

Duff, *Laboratory Manual — A.C. Fundamentals*.

Lister, *Electric Circuits and Machines*.

Zbar and Schildkraut, *Laboratory Manual — Basic Electronics*.

Objectives

1. To impart to the student a knowledge of the role that electricity and electronics play in industry today, and the opportunities that exist in this rapidly expanding field.
2. To equip the student with sufficient skill and knowledge such that he will be highly employable in the electrical field.
3. To provide the student with sufficient background in this area such that on entering the apprenticeship program he will be able to advance at an accelerated rate on the basis of his proven ability on the job.
4. To prepare a student to a degree of competency acceptable to the institutes of technology, sufficient for entry into the second year of the Electrical Technology program.

ELECTRICITY 12**Objectives**

1. To provide exploratory experiences in the field of electricity and electronics.
2. To provide opportunities for employment in the electrical and electronics field.
3. To provide a background for Electricity 22 and Electronics 22.

Course Content

1. Opportunities in Electricity and Electronics.
2. Basic Concepts of Electricity.
3. Sources of E.M.F.
4. Basic D.C. Circuits.
5. Magnetism and Electromagnetism.
6. D.C. Measuring Instruments.

ELECTRICITY 22**Course Content**

1. Review.
2. Electromagnetic Induction.
3. D.C. Generators.
4. D.C. Motors and Control.
5. A.C. and Single Phase Circuits.
6. Laboratory Experiments.

ELECTRICITY 32**Course Content**

1. Electrical Sketching and Blueprint Reading.
2. Alternating Current and Single Phase Circuits.
3. A. C. Measuring Instruments.
4. A. C. Generators.
5. A. C. Motors and Controls.
6. Transformers.
7. Electronics.
8. Lighting.
9. Experiments, Shop Activities and Related Theory.
10. Code Reference for Laboratory Manuals.

ELECTRONICS 22 and 32

Objectives

1. To impart to the student a knowledge of the role that electricity and electronics play in industry today and the opportunities that exist in this rapidly expanding field.
2. To equip the student with sufficient skill and knowledge such that he will be highly employable in the electrical or electronics field.
3. To provide the student with sufficient background such that on entering the apprenticeship program, he will be able to advance at an accelerated rate on the basis of his proven ability on the job.
4. To prepare a student to a degree of competency acceptable to the institutes of technology sufficient for entry into the second year of the Electronic Technology program.

ELECTRONICS 22

(Prerequisite: Electricity 12)

Texts

Grob, *Basic Electronics*.

Malvino, *Transistor Circuit Approximations*.

Zbar, *Laboratory Manual — Basic Electricity*, 3rd edition.

Zbar, *Laboratory Manual — Basic Electronics*, 3rd edition.

Course Content

1. Introduction and Orientation.
2. Electricity.
3. Ohm's Law.
4. Series Circuits.
5. Parallel Circuits.
6. Series-Parallel Circuits.
7. Network Theorems.
8. Direct-Current Meters.
9. Conductors and Insulators.
10. Resistors.
11. Batteries.
12. Magnetism.
13. Electromagnetic Induction.
14. Alternating Voltage and Current.
15. Inductance.
16. Inductive Reactance.
17. Inductive Circuits.

18. Capacitance.
19. Capacitive Reactance.
20. Capacitive Circuits.
21. Alternating Current Circuits.
22. Complex Numbers.
23. Resonance.
24. Filters.
25. Semi-Conductor and Vacuum Tube Diodes.
26. Power Supplies.
27. Principles of Amplification.
28. Transistors.
29. Operating Limits (CE).
30. Classes of Operation (CE).
31. Bias Stabilization (CE-CB).
32. Electron Tubes.
33. Review.

ELECTRONICS 32

Texts

- Grob & Kiver, *Application of Electronics*.
 Malvino, *Transistor Circuit Approximations*.
 Sam, *Photofact: Television Course*.
Theory and Use of Electronic Test Equipment, U.S. Government
 Printing Office, Washington, D.C.
 Zbar, *Laboratory Manual — Basic Electricity*, 3rd edition.
 Zbar, *Laboratory Manual — Basic Electronics*, 3rd edition.
 Zbar and Schildkraut, *Laboratory Manual, Basic Radio*.

Course Content

1. Review.
2. Vacuum-Tube Amplifiers.
3. Audio Circuits.
4. Transistor Amplifiers (Large Signal Operation).
5. Bias Arrangements.
6. A-C Operation.
7. Cascading Stages.
8. Temperature Effects.
9. Frequency Response.
10. Transistor and Tube RF Amplifiers.

11. Transistor Oscillators and Vacuum Tube Equivalents.
12. Introduction to Receiver Principles.
13. Mixers and Converters.
14. IF Amplifiers.
15. A.M. Demodulation.
16. Automatic Volume Control.
17. The Complete Superhet Receiver Transistor and Tube.
18. Signal Generators.
19. Cathode Ray Tubes.
20. Oscilloscopes.
21. RF and IF Circuit Alignment.
22. AM Receiver Circuit Fault Finding.
23. Frequency Modulation Receivers.
24. Antennas and Transmission Lines.
25. Additional Sonic Conduction Development.
26. The Television System.
27. Production of the Transmitted TV Signal.
28. Detailed Functional Block Diagram of Black and White Receiver.
29. Picture Tubes.
30. Power Supplies.
31. Video Amplification.
32. Brightness Control and DC Clamping.
33. Video Detector.
34. Automatic Gain Control.
35. Sync Separation.
36. Deflection Oscillators.
37. Horizontal AFC Circuits.
38. Vertical Deflection Circuits.
39. Horizontal Deflection Circuits.
40. Picture IF Amplifiers.
41. The RF Tuner.
42. Antennas and Transmission Lines.
43. The FM Sound Signal.
44. Receiver Servicing (Lab Program).

FOOD PREPARATION**Texts****Food Preparation 12**

No required text.

Food Preparation 22

L. H. Kotschevar, *Quantity Food Production*.

E. A. Harris, *Professional Restaurant Service*.

Food Preparation 32

L. H. Kotschevar, *Quantity Food Production*.

E. A. Harris, *Professional Restaurant Service*

FOOD PREPARATION 12, 22, 32**Objectives**

1. To provide boys and girls of high school age with knowledge, fundamental skills and desirable attitudes in food preparation and service so as to make them highly employable in the food service industry.
2. To prepare students to a level which will enable them to qualify for one year of time credit and first year technical credit on passing the first year examination for Apprenticeship.
3. To prepare a student to a degree of competency acceptable to the Institutes of Technology sufficient for entry into the second year of their Commercial Cooking program.
4. To impart to the students a knowledge of the food service industries and the opportunities that exist in this essential and expanding field.

FOOD PREPARATION 12**Course Content**

1. Opportunities in the Field of Commercial Cooking and in Related Areas.
2. Safety in the Kitchen.
3. Kitchen Equipment and Food Materials.
4. Cooking terms.
5. Cleaning and Sanitation.
6. Measuring and Planning.
7. Basic Nutrition and Menu Planning.
8. Pantry Production.
9. Salads and Salad Dressings.
10. Vegetables and Potatoes.
11. Stocks, Soups and Sauces.
12. Eggs, Egg and Breakfast Cooking.
13. Meats: Cutting and Cooking.
14. Poultry and Fish.
15. Deep Fat Frying.
16. Spices and Herbs.
17. Bakers' Products and Desserts.
18. Beverages.

FOOD PREPARATION 22**Course Content**

1. Orientation.
2. Cleaning and Sanitation.
3. The Serving of Food.
4. Weights, Measures and Terminology.
5. Pantry Production.
6. Stocks, Soups, Sauces and Gravies.
7. Beverages.
8. Eggs and Dairy Products.
9. Vegetable Cookery.

10. Meat, Fish and Poultry.
11. Spices and Herbs.
12. Fats and Oils.
13. Cereals and Cereal Cookery.
14. Desserts.
15. Baking Ingredients.
16. Quick Breads.
17. Cakes, Cookies and Frostings.
18. Pies and Pastries.

FOOD PREPARATION 32

Texts

Course Content

- | | |
|---------------------------------------|-----------------------------------|
| 1. Orientation. | 11. Breakfast Cookery. |
| 2. Cleaning and Sanitation. | 12. Desserts. |
| 3. The Serving of Food. | 13. Breads. |
| 4. Pantry Production. | 14. Cakes, Cookies and Frostings. |
| 5. Stocks, Soups, Sauces and Gravies. | 15. Pies and Pastries. |
| 6. Cheese. | 16. Refrigeration and Freezing. |
| 7. Vegetable Cookery. | 17. Short Order Cooking. |
| 8. Meat, Fish and Poultry. | 18. Kitchen Management. |
| 9. Spices and Herbs. | 19. Work Methods. |
| 10. Fats and Oils. | 20. Nutrition. |
| | 21. General Knowledge. |

GRAPHIC ARTS 12, 22, 32

Texts

Graphic Arts 12

Polk, *Practice of Printing*.

Graphic Arts 22

Polk, *Practice of Printing*.

Cogoli, *Photo-Offset Fundamentals*.

Graphic Arts 32

Delmar, *Printing Layout and Design*.

Lithographer 3 and 2: U.S. Government Printing Office.

Objectives

1. To develop skills and techniques basic to the graphic arts industry.
2. To provide students with related and technical information essential to develop proper work habits and attitudes.
3. To develop an appreciation of fine craftsmanship.
4. To develop the student for self-supporting citizenship.
5. To develop safety consciousness in work habits.

GRAPHIC ARTS 12

Course Content

1. Role of Graphic Arts in Industry.
2. The California Job Case.
3. Space Materials.
4. The Anatomy of Type.
5. Hand Composition and Distribution.
6. Tying Up a Type Form.
7. Operation of the Proof Press.
8. The Printer's System of Measurement.
9. Characters Difficult to Recognize.
10. Proofreading.
11. Hyphenation.
12. Straight Matter Composition.

13. Cutting and Mitering.
14. Development of the Alphabet.
15. Basic Type Face Sizes.
16. Basic Type Face Weights and Widths.
17. Determining Correct Placing of Unfamiliar Type.
18. Origin and Classification of Type Faces.
19. Introduction to Layout.
20. Lock-up for the Platen Press.
21. Platen Press Feeding.
22. Preparation of the Platen Press for Running.
23. Machine Composition.
24. Introduction to Lithography.
25. Introduction to Bindery.
26. Career Opportunities.
27. Graphic Art Terms.

GRAPHIC ARTS 22

Course Content

1. Origin and Development of Movable Types.
2. Evolution of the Printing Press, Platen, Cylinder, Rotary.
3. Principles of Typographic Design.
4. Layout for Letterpress and Offset.
5. Rule Form Composition.
6. Display Composition.
7. Platen Presswork Including Automatic Platen.
8. Printing Press Rollers.
9. Printing Ink.
10. Paper: Paper Making, Printing Papers.
11. Paper Cutting.
12. Letterpress Printing Plates.
13. Color Register Printing.
14. Special Letterpress Operations.
15. Bindery Operations and Machines.
16. Thermography.
17. School Newspaper.
18. Rubber Stamp Making.
19. Introduction to Cylinder Presswork.
20. Elements of Photography.
21. Origin and Development of Lithography.
22. Copy Preparation for Offset Lithography.

23. Introduction to Camera Work.
24. Film Processing.
25. Film Opaquing, Corrections and Additions.
26. Layout and Stripping.
27. Platemaking.
28. Offset Presswork.
29. Other Duplicating Processes for Home, School or Office.
30. Apprenticeship in the Graphic Arts Industry.

GRAPHIC ARTS 32

Course Content

1. Comparative Study of the Three Printing Processes Using Plates.
2. Basic Operations of Casting Machines.
3. Copy-Fitting and Markup.
4. Page Imposition and Lockup.
5. Advanced Presswork.
6. Intaglio Printing (Gravure).
7. Screen Process Printing.
8. Folding, Box Cutting and Printing.
9. Xerography and Xeroprinting.
10. Advanced Darkroom Practices.
11. Advanced Layout and Design.
12. Advanced Copy Preparation for Offset Lithography.
13. Copy-producing Typewriters.
14. Photo Composition.
15. Color Process Printing.
16. Book Binding.
17. Modern Packaging.
18. Casting and Job Estimating.
19. The Future of the Graphic Arts Industry.

MACHINE SHOP 12, 22, 32

Texts

Machine Shop 12

Hallett, *Machine Shop Theory and Practice*.

Machine Shop 22 and 32

Feirer & Tatro, *Machine Tool Metalworking*.

General Objectives

1. To impart knowledge of the role the machinist plays in industry and the opportunities that exist in this field.
2. To equip a student with sufficient skill and knowledge such that he will be highly employable in the machinist trade.

3. To enable a student to advance at an accelerated rate on the basis of his proven ability.
4. To prepare a student to a degree of competency acceptable to the Institutes of Technology, sufficient for entrance into the second year of the mechanical technology course.

Specific Objectives

1. To enable students to operate power machines efficiently, safely and accurately.
2. To acquaint student with the basic types, features and functions of machinery used in the machinist trade.
3. To develop desirable habits concerning safety and good working relationships; proper use of time and materials.
4. To develop high standards of workmanship.
5. To develop skills and knowledge required to interpret blueprints and to produce accurate drawings.
6. To make student familiar with different types of metal used in industry.

MACHINE SHOP 12

Course Content

1. The Machinist Trade.
2. Layout Work.
3. Bench Work.
4. Metallurgy.
5. Lathe Work.
6. Power Sawing.
7. Drill Press Work.
8. Grinding.

MACHINE SHOP 22

1. Layout Work.
2. Bench Work.
3. Hot Metal Work.
4. Milling.
5. Grinding.
6. Shaping.

MACHINE SHOP 32

1. Mechanical Drafting
 - (a) Lettering
 - (b) Instruments and Materials
 - (c) Geometrical Construction
 - (d) Theory of Projection
 - (e) Dimensioning

- (f) Technical Sketching
 - (g) Tolerancing
 - (h) Threads, Fasteners and Springs
 - (i) Intersections and Development
 - (j) Revolutions
 - (k) Working Drawings
 - (l) Reproduction of Drawings.
2. Lathe Work.
 3. Milling.
 4. Grinding.
 5. Shaping.
 6. Gauges and Gauging.
 7. Materials.
 8. General Information
 - Employment opportunities
 - Provincial apprenticeship program
 - Workmen's compensation
 - Unemployment Insurance
 - Cost estimating.

PIPE TRADES 12, 22, 32

Texts

Pipe Trades 12

Plumbing Trade Information Sheets.

Pipe Trades 22

Plumbing Trade Information Sheets.

Plumbing and Drainage Regulations (Alta. Dept. of Health).

Pipe Trades 32

Steam and Hot Water Information Sheets.

C.S.A. Standard B149.

Pipefitters and Welders Handbook.

Objectives

1. To equip a student with sufficient skill that he will be highly employable in pipe trades.
2. To enable the student upon entering an apprenticeship to advance at an accelerated rate.
3. To assist the student in the development of desirable work habits, a sense of responsibility and ability to cooperate with associates.
4. To assist in development of an attitude of safety.
5. To acquaint the student with the wide field of the pipe trades and the opportunities for employment and advancement.

PIPE TRADES 12

Course Content

1. Opportunities in the Pipe Trades
 - (a) Plumbing
 - (b) Steam Fitting
 - (c) Gas Fitting
 - (d) Welding
 - (e) Refrigeration
 - (f) Sprinkler Controls
 - (g) The Apprenticeship Program.
2. Orientation
 - (a) Tools — Use and Care
 - (b) Basic Pipe Threading
 - (c) Bell and Spigot Pipe
 - (d) Fittings and Tools
 - (e) Copper Pipe and Fittings
 - (f) Hangers and Supports
 - (g) Pipe Grading
 - (h) Pipe Bending and Offsets
 - (i) Temperature Pressures; Measurements and Effects
 - (j) Heat Transfer
 - (k) Heating
 - (l) Plumbing.

PIPE TRADES 22

1. Gas Welding and Cutting.
2. Oxy-Acetylene Torch.
3. Safety.
4. Gas Welding.
5. Brazing and Welding.
6. Silver Solder.
7. Electric and Arc Welding.
8. Weld Defects.
9. Blueprint Reading.
10. Plumbing.
11. Plan Reading.
12. Mathematics.
13. Service Work.
14. Flushometers.
15. Water Closets.
16. Faucets and Valves.
17. Water Supply.
18. Water Meters.
19. Plan Reading.
20. Water Softeners.

21. Domestic Hot Water Heaters and Systems.
22. Plumbing Code and Plan Reading.
23. Principles of Drainage.
24. Venting.
25. Plumbing Fixtures.
26. Sewage Disposal.
27. Service Work.
28. Domestic Hot Water and Water Softeners.
29. Plastics.

PIPE TRADES 32

1. Heating.
2. Steam Generating Units and Plan Reading.
3. Boiler Code.
4. Steam Heating System and Plan Reading.
5. Rigging.
6. Heating Equipment and Plan Reading.
7. Steam Traps.
8. Expansion Allowance.
9. Insulation.
10. Maintenance of a Heating System—Components and Plan Reading.
11. Flow Control and Balancing of H. W. System.
12. High Pressure Systems.
13. Principles of Heat Loss.
14. Traps.
15. Heating Systems.
16. Low Pressure Steam Systems.
17. Condensate.
18. Principles of the Centrifugal Pump.
19. Designing a Domestic Heating System.
20. Pipe Failures.
21. Instrumentation.
22. Control Valves.
23. Boiler Controls.
24. Review of Silver Soldering.
25. Gasfitting.
26. Combustion.
27. Burners.
28. Venting Gas Appliances.
29. Gas Approval Board
30. Alberta Gas Code.
31. Installation of Gas Lines.
32. Plan Reading.
33. Controls.
34. Field Trip to Industrial Plants.

(PRODUCTION WOODWORKING DELETED)

SHEET METAL 12, 22, 32

Texts

Sheet Metal 12

Neundorf and Stevens, *Sheet Metal Practice, Part I.*

Sheet Metal 22 and 32

Hand Processes, Sheet Metal Series.

Machine Processes, Sheet Metal Series.

General Objectives

1. To impart a knowledge of the role of the sheet metal worker in industry.
2. To equip the student with skill and knowledge such that he will be highly employable in the sheet metal trade.
3. To enable the student when he becomes a sheet metal apprentice to advance at an accelerated rate.

Specific Objectives

1. To enable the students to use the tools and machines of the trade efficiently, accurately and safely.
2. To develop habits which will result in good use of time and materials, good working relationships and safety.
3. To develop high standards of workmanship.
4. To familiarize students with the principles and practices involved in accurate measuring and working to close tolerances.
5. To develop the skills and knowledge required to both produce and interpret blueprints accurately.

Course Content

1. Introduction.
2. Shop Safety.
3. Common Sheet Metals.
4. Hand Tools and Stakes.
5. Soldering.
6. Stationary Floor Machines.
7. Bench and Rotary Machines.
8. Layout and Fabrication of Sheet Metal Projects.

SHEET METAL 22

Course Content

1. Shop Procedure and Safety.
2. Common Sheet Metals.
3. Hand Tools and Stakes.
4. Soldering.
5. Stationary Floor Machines.
6. Bench and Rotary Machines.
7. Layout and Fabrication of Sheet Metal Projects.
8. Introduction to Principles of Air Movement as in a Gravity Furnace.

SHEET METAL 32

1. Shop Procedure and Safety.
2. Industrial and Labour Relations.
3. Layout and Pattern Development.
4. Air Movement in Forced Air Systems.

WELDING

Texts

Welding 22

Bennett & Siy, *Blueprint Reading For Welders*.

Althouse, Turnquist and Bowditch, *Modern Welding*.

Welding 32

Bennett & Siy, *Blueprint Reading For Welders*.

Althouse, Turnquist and Bowditch, *Modern Welding*.

General Objectives

1. To impart to the student a knowledge of the role that welding plays in industry and the opportunities that exist in this field.
2. To equip a student with sufficient skill and knowledge such that he will be highly employable in the welding trade.
3. To enable a student entering the welding apprenticeship program to advance at an accelerated rate on the basis of proven ability.

Specific Objectives

1. To enable students to use welding equipment efficiently, accurately and safely.
2. To develop habits of safety, good use of time and materials and good working relationships.
3. To develop the skill to prepare and interpret accurate working drawings.
4. To familiarize students with different types of metal used in industry and problems related to the welding or brazing of these.

WELDING 12

1. Trade Study.
2. General Shop Practice
 - Cutting Metal to a Line
 - Drilling a Hole
 - Using an Electric Drill
 - Using a Grinder
 - Using a Punch
 - Reconditioning a Cold Chisel
 - Using a Hammer
 - Installing Screws
 - Fastening a Nut and Bolt
 - Using Clamping Devices
 - Using a Power Hacksaw
 - Shearing Sheet Metal and Plate
 - Extinguishing a Fire
 - Storing Material in a Rack
 - Personal and Shop Cleanliness
 - General Safety.

WELDING 22

1. General Shop Practice
 - (a) Power Sanding
 - (b) Filing
 - (c) Storing Materials.
2. Using and Storing Oxy-Acetylene Equipment
 - (a) History of Oxy-Acetylene Welding
 - (b) Handling and Storing Oxygen Cylinders
 - (c) Handling and Storing Acetylene Cylinders
 - (d) Handling and Storing Cylinders of other Gases
 - (e) Generating Acetylene Gas
 - (f) Setting up Equipment
 - (g) Using Oxy-Acetylene Equipment
 - (h) Disassembling and Storing.
3. Welding Ferrous Metals
 - (a) Preparing Job
 - (b) Running a Bead
 - (c) Welding Sheet Metal
 - (d) Welding Sheet Plate
 - (e) Welding Cast Iron
 - (f) Welding Cast Steel.
4. Welding Non-Ferrous Metals
 - (a) Welding Aluminum and Aluminum Alloys
 - (b) Welding Copper and Copper Alloys
 - (c) Welding Zinc and Zinc Base Die Castings.
5. Brazewelding and Brazing
 - (a) Brazewelding Mild Steel. Cast Iron, Malleable Castings
 - (b) Brazing with Silver Alloys
 - (c) Brazing Aluminum Alloys.
6. Installing and Using Welders
 - (a) History of Electric Arc Welding
 - (b) Using D.C. Welder
 - (c) Using A.C. Rectifier Welder
 - (d) Using D.C. Rectifier Welder.
7. Welding Ferrous Metals
 - (a) Preparing Job and Equipment
 - (b) Running a Bead
 - (c) Welding Sheet Metal
 - (d) Welding Mild Steel Plate and Low Alloy Plate
 - (e) Welding Steel Pipe
 - (f) Welding Cast Iron.

8. Surfacing
 - (a) Building up a Surface.
9. Cutting
 - (a) Mild Steel and Low Alloy Steel
 - (b) Mild Steel Plate
 - (c) Bevel Cutting
 - (d) Cutting Cast Iron.
10. Flame Heating and Heat Treating
 - (a) Flame Hardening Medium Carbon Steel
 - (b) Flame Softening Medium Carbon Steel
 - (c) Forming, Bending, Straightening by Use of Heat.
11. Metallurgy
 - (a) Industrial Tours Films
 - (b) Heat Treatment.

WELDING 32

Course Content

1. Using and Storing Oxy-Acetylene Equipment
 - (a) Preparing Job
 - (b) Running Bead
 - (c) Welding Sheet Metal — all Positions
 - (d) Welding Steel Plate — all Positions
 - (e) Welding Pipe
 - (f) Welding Cast Iron.
2. Welding Non-Ferrous Metals
 - (a) Aluminum and Aluminum Alloys
 - (b) Copper and Copper Alloys
 - (c) Zinc and Zinc Base Die Castings — Flat.
3. Brazewelding and Brazing
 - (a) Brazewelding Mild Steel, etc.
 - (b) Brazing with Silver Alloys
 - (c) Brazing Aluminum and Aluminum Alloys.
4. Surfacing
 - (a) Surfacing with Bronze
 - (b) Hard Surfacing
 - (c) Hard Setting.

5. Installing and Using Electric Arc Welders
 - (a) History
 - (b) Using D.C. Welder
 - (c) Using A.C. Transformer Welder
 - (d) Using D.C. Rectifier Welder.
6. Welding Ferrous Metals
 - (a) Preparing Job
 - (b) Running a Bead
 - (c) Welding Sheet Metal
 - (d) Welding Mild Steel Plate and Low Alloy Plate
 - (e) Welding Steel Plate
 - (f) Welding Cast Iron.
7. Welding Various Metals
 - (a) Welding Stainless Steel
 - (b) Welding Copper Base Alloys
 - (c) Welding Steel Pipe
 - (d) Welding Cast Iron.
8. Welding Various Metals
 - (a) Stainless Steel
 - (b) Copper and Copper Base Alloys
 - (c) Aluminum and Aluminum Base Alloys
 - (d) Medium and High Carbon Spring Steel.
9. Surfacing
 - (a) Building up Surfaces.
10. Inert Gas Welding (Optional)
 - (a) With Shielded Tungsten Inert Gas (T.I.G.)
 - (b) With Metal-Shielded Inert Gas (M.I.G.).
11. Cutting
 - (a) Mild Steel, etc.
 - (b) Mild Steel Pipe
 - (c) Flame Cutting Metals of Poor Cutability
 - (d) Bevel Cutting
 - (e) Gauging Mild Steel.
12. Flame Heating and Heat Treating
 - (a) Flame Hardening Carbon Steel
 - (b) Flame Softening Carbon Steel
 - (c) Forming Beading by use of Heat.
13. Testing Welds
 - (a) Various Methods.
14. Developing and Blueprint Reading.
15. Metallurgy (20 hours).
16. General (Trade and Industrial) 40 hours.

FRENCH as the LANGUAGE of INSTRUCTION

REGULATIONS AS PER SECTION 386 OF THE SCHOOL ACT

1. A copy of the resolution passed by the Board pursuant to Section 386 (1) of the School Act shall be forwarded to the Minister of Education prior to the offering of instruction in French.
2. The courses of study used shall be those prescribed by the Minister as indicated in Section 10 (a) of the Regulations of the Department of Education (Alberta Regulation 303/62).
3. Courses beyond Grade II in which the French language is permitted are :
 - Grades III to VI — Fine Arts, French, Handwriting, Health, Mathematics, Physical Education, Science and Social Studies.
 - Grades VII to XII — Fine Arts courses, French, Mathematics, Physical Education, Science, Social Studies, and other social sciences. Other courses may be offered in French with the written consent of the Minister.
4. Grades IX and XII examinations in the French language will be provided in the following subjects at the discretion of the Minister :
 - Grade IX — Social Studies, Mathematics, Science.
 - Grade XII — Social Studies 30, Mathematics 30, Mathematics 31, Chemistry 30, Physics 30, Biology 30, French 30.
5. Provision shall be made by the Board for the instruction in English of all students whose parents or guardians desire them to be instructed in English. Such provision might include :
 - a. setting up separate classes where the language of instruction is English.
 - b. enabling students to attend other schools where the language of instruction is English.

The following materials are now available in the French translations and are recommended for use in September, 1969 :

Biology

Weisz, *Eléments de Biologie*.

Weisz, *Guide Methodologique*.

The text and the teaching guide have been translated and adapted from the second edition of the text *Elements of Biology* by Weisz. These materials are published by McGraw-Hill.

Business Education

Ernestine, Sister Marie, *Stenographie Gregg*.

Ernestine, Sister Marie, *Exercices de Stenographie Gregg*.

Ernestine, Sister Marie, *Transcription de la Stenographie Gregg*.

These materials are the French adaptation of the Diamond Anniversary Collection of Gregg Shorthand.

Chemistry

Pimental, G. C., *La Chimie, Science Experimentale*.

La Chimie, Science Experimentale — Feuille de reponses

— Solutionnaire

— Examen No. 1, 2, 3, 4, 5

— Cahier de rapport

— Cahier de laboratoire.

Noms, formules et charges de quelques ions — Chart.

Potentiels normaux d'oxydoreduction — Chart.

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